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Heads Life Underwriters

Roger Martel, of Montreal, a manager of Alliance Mutual Life Insurance Co., is the new president of the Life Underwriters Association of Canada. The association has 10,000 members, represents 85% of the field personnel of our life insurance industry, works for the advanced training of life underwriters.

NATION'S BUSINESS

Walter Gordon, MP, The Next Step?

Walter Gordon, of Royal Commission fame, is a responsible and knowledgeable private citizen. Many ordinary Canadians have learned to listen to and agree with him. But in view of what he had to say a few days ago to the Ontario Federation of Labour, it seems a pity that he hasn't a wider and more influential audience such as, for example, the House of Commons.

Indeed, there are political overtones in his speech that suggest that the House of Commons is where Mr. Gordon is heading. He leaves the impression that he is not unwilling to be the Minister of Finance when the Liberals next come to power. This is not to be deplored; we need men of Gordon's stamp in political life whatever the party.

There are two basic questions about which, he believes, Canadians must make up their minds soon:

First. Are we prepared to concede enough power to the federal government to enable it to effectively influence the rate of economic activity throughout the country?

Second. What importance do we place upon retaining our economic and political independence from the U. S.?

Mr. Gordon thinks our "balkanized", province-by-province approach to economic problems is all wrong. And in theory, anyway, he has a point. What nineteenth century father of confederation could have foreseen twentieth century exigencies of defence, atomic power, full employment?

Messrs. Rowell and Sirois, also of Royal Commission renown, looked at the emergencies of the thirties and said what everybody realized: Only wider federal powers can cope with national problems of a twentieth century scale. Mr. Gordon apparently believes that today's problems, although obscured by prosperity, are equal in stature and require similar solutions. He grips nettles firmly.

With honesty and lucidity, Mr. Gordon also tells us: "Canada, by degrees, is losing a considerable measure both of economic and political independence (to the U. S.). Either we should force the pace of integration of the economies of the two countries, or alternatively, be willing to pay the price of continued independence."

On this score, Mr. Gordon makes no choice. But there will be a great many people in this country who will feel that dollars and cents are not always the determining factors, that it is not worth sacrificing Canadianism to maximize prosperity. Others may also answer his first question by going a step further and proclaiming provincial autonomies more important than national efficiences.

But Mr. Gordon is to be commended for making Canadians ask themselves if they know where they are going and why, if they do have realistic national objectives.

If, as seems apparent, Mr. Gordon has political ambitions we can only wish him luck. Parliament can use him.

* * *

New Goals or More Disarray?

The psychologists say that the bigger the gap between a person's goals and his achievements, the unhappier he will be. By this measure, Western statesmen should be near suicide, so great is the gap between the peaceful world that we envision and our progress in the achieving of it.

U.S.S.R. shouting about total disarmament and peaceful competition—real or phony as its intentions may be—has captured world imagination. The apparent U. S. desire to resume underground nuclear tests makes the West look like a warmonger. France's wilful explosion of an atomic bomb in the Sahara illustrates the sad weakness of the Western alliance and has set back the Western cause in Africa.

Mr. Diefenbaker's recent disarmament proposals are good in that they set out small goals that just might be achieved. But they reveal, too, how far the Western countries are from developing a comprehensive disarmament plan containing step-by-step moves leading to final objectives.

This begets the fearful thought that we, in the West, simply haven't got sensible long-range goals. We are avoiding unhappiness by avoiding reality. But the danger is this: Those who ignore reality, react badly under pressure and shoot off unnecessary and destructive fireworks. In the atomic age, this is horrendous folly..

In the light of the distressing disarray of the Western alliance, there is much point to Adlai Stevenson's suggestion that we hold a North Atlantic Conference to outline new common goals for defence, disarmament, space exploration, tariffs, and aid to underdeveloped areas.

GRADS IN U. S.

More Money Woe For Our Colleges?

This new U.S. tax ruling could hit alma mater funds from south of the border . . .

By C. KNOWLTON NASH

WASHINGTON — New money problems may be in store for a number of Canadian universities.

U. S. tax experts have been considering a new ruling that could reduce the flow of donations coming from "old grads" of Canadian universities now living in the U. S. who want to contribute to their alma mater.

A plan is under "active consideration" by the Internal Revenue Service that would make non-deductible for tax purposes donations to organizations set up in the U. S. by foreign groups when the money collected goes to a foreign country.

That could hit hard at the money-raising efforts in the U. S. by the Canadian universities.

The deductibility of donations has been a considerable factor in wooing contributions from Canadian graduates now living in the U. S. Without it, the donors may become less generous.

Donations given to the Canadian universities outright are not deductible under U. S. law.

But to get around this point and make donations more attractive from a tax standpoint for U. S. residents, a number of universities have set up corporations in U. S. cities whose job is to collect donations from those "old grads" and send the money on to the university.

Thus, there is **Dalhousie Uni-**

(Continued on page 8, col. 2)

U.S. Engineering Giant Buys Boyd Atomic System

By JACK McARTHUR

MONTREAL (Staff)—A controversial Canadian - developed approach to atomic power output — which departs radically from Canada's "official" plan — has found a highly respected U. S. ally.

Arthur D. Little Inc., huge industrial research firm centred in Cambridge, Mass., has acquired designs and patents relating to the Daniels-Boyd nuclear steam generator from consulting engineer Winnett Boyd of Montreal.

This is the latest move relevant to a hot disagreement among our power experts over the best possible course of development for atomic power in Canada.

It further underlines questions that have been openly debated for months (FP, Oct. 24, 1959; Jan. 16) to Canada's official heavy water, natural uranium approach to atom power.

(For other stories on atom power and uranium, see p. 3, p. 26.)

In the balance are two things of vital importance for Canada:

- **The future health,** already looking a little shaky, of our big uranium producing industry.
- **Power costs** in regions event-

(Continued on page 8, col. 6)

Expecting 8% Sales Increase In Appliances

By RAY MAGLADRY

Appliance makers are penciling a rising line onto 1960 sales graphs.

They expect gains of 5%-8%.

Giving a flip to consumer spending on household equipment:

- **Technical** improvements on newer models.
- **Growing potential** for "replacement" sales as early post-war equipment comes due for trade-in.

Last year sales were over 454,000 for 13% gain on 1958.

Among the expected strong sellers this year:

- **Automatic** laundry equipment, sparked by expansion of dealer networks in big urban areas.
- **Home** combination washer-dryers are expected to spurt ahead by over 40%, as the market is developed for these relatively new products.
- **Dryers** generally will outpace washers among home appliances.
- **Air conditioning** equipment will probably gather a growing share of spending on the home, as the industry pegs its promotion to the 1959 heat wave.

Secret Letters Set Trend In Australian Trade Pact

By MICHAEL BARKWAY

OTTAWA (Staff) — The new trade agreement with Australia, which was signed last week after nine months delay, is accompanied by a secret exchange of letters.

It's designed to give Australia some assurance that Canada will not slap import restrictions or bans on Australian goods.

Details, p. 15.

Such an assurance from Canada was a condition without which the Australian government refused to make an agreement.

The Canadian government was reluctant to give undertakings that might prevent it from protecting Canadian farmers against cheaper Australian produce.

Argument about the form of assurances to be included in the secret letter held up signing of the agreement for nine months.

The Canadian - Australian agreement is a new departure in another way, too.

The bargain between the two countries is not about tariff reductions; tariff rates remain as they were.

The new bargain is about the "binding" of margins of preference. The assurance it brings Canadian traders is that whatever tariffs they have to pay in Australia, all countries paying the most-favored-nation rate will have to pay more.

On most important items the Canadian preference, as against the U. S. (for example) is fixed at 7½%.

This applies to aluminum and aluminum alloys, typewriters and office machines, motor vehicle parts, aircraft parts and certain chemicals.

But the preference on lumber, newsprint and stainless steel is fixed in specific terms.

Spring Fashion Sales Head for 5% Upswing

By BEATRICE RIDDELL

Pre-Easter fashion shows in the next few weeks will start Canadian women hankering for new spring outfits.

This year, prices are expected to remain firm, and accessories will take a bigger slice of the wardrobe budget.

Prediction: Spring sales may be up as much as 5% over last year. (For 1959 as a whole, sales were up about 3.5% over 1958).

Retailers' orders at the National Garment Salesmen's Association spring markets held in key Canadian cities during January reached a record volume.

But summer should make the merriest cash register music.

Reason: Paris spring collections introduced the first major fashion gimmick since the chemise. It's a lowered waist and loose-fitting princess line.

Paris styles are usually reflected in Canadian garments the following season. And while some of the new Paris lines will appear for spring, there will be many more for summer.

Meaning: While milady may just scrape by on last year's spring outfit, last summer's wardrobe will definitely be passé.

But there will be enough news in spring showings to make the growing corps of fashion-conscious women hurry to the shops.

Biggest spring news will be color — pale and pasteled. "Whitened" greens, beige, pink and yellow are the rage. Even coats and suits will come in off-white, cream and pastels.

Color trend will be carried through in hose, shoes, gloves and handbags.

Meaning: Accessory sales will sore to round off the new wardrobe. White shoes, for instance, not seen much in recent years are expected to make a dramatic comeback.

Also for spring: New lightweight, flattened and tightly-woven fabrics. Accent will be on travel, with more drip-dry crease-resistant materials.

Inside

Chrysler's Big Fight for the Top

Chrysler of Canada has started a five-phase fighting program to regain its prominence among the Big Three. Part of the big plan: Revolutionary new leased dealerships. ..... p. 25

Science, Big Business in Fish

Here's how a modern fishing empire meets its problems afloat and its market worries ashore. ..... p. 25

Nuclear Business Without Uranium

Here's an idea for a "nuclear" business without any worries about uranium markets. ..... p. 10

Why Hassle Slows Refugee Plan

Here's why our refugee program has bogged down in a hassle between the federal government and private agencies. ..... p. 41

BRUNSWICK MINING

This Deal Could Make N. B. Base Metals Hub

By FRANK KAPLAN

The big breakthrough that could build New Brunswick into one of the world's major base metal producing areas may be under way.

It's a financing and sales deal arranged by **Brunswick Mining & Smelting** (FP, Feb. 6) — the big discovery property in the Bathurst area — that should see production start early in 1962.

With any luck, about three years later the second stage — a smelter at Bathurst, N.B. — could blow in, to be followed over the longer-run future with plants to produce sulphuric acid, iron, fertilizers — all the by-products of a fully-integrated mining operation like Trail, B.C.

At least that's the dream and the plan that raised the hopes of the Maritimes as the extensive reserves of the Bathurst area started to unfold in 1953.

Hopes rose further when **Heath Steele Mines** started production in 1957.

But the dream foundered on a worldwide storm that battered base metal prices down, forced Heath Steele to close in mid-1958 and Brunswick to suspend development, and generally slowed activity in New Brunswick.

Now a second attempt is getting under way under improved market conditions for metals and with considerably greater

(Continued on p. 9, col. 5)

Signs & Portents

ELECTRIC BLANKET for sports fields may keep them clear of snow and ice. U. K. firm says it put 2,200 yd. of heating cable below the turf of a London sports park without disturbing the surface or making the field unusable during the work.

* * *

SOLID GASOLINE may mean tankless gasoline storage and transport in Canada's Arctic. The Russians used it on a recent South Pole expedition. Using ultrasonics and adding other chemicals, gasoline can be solidified into bright yellow bricks. The bricks are squeezed to release the fuel.

* * *

LUGGAGE LOCKERS at bus and railway terminals may lose the drab gray look in an appeal to the ladies. One manufacturer plans to scent the lockers, and already uses bright stainless steel so a gal can primp up by looking at her reflection.

* * *

ANOTHER SIGN that paper companies are looking to the U. S. for expansion. Anglo Southern Paper Corp., an associate of Canada's Anglo-Canadian Pulp & Paper Mills Ltd., says it will build a $60 million pulp and paper mill in Texarkana, Texas.

WOOING BUILDERS

Gas and Oil Go to War For Home Heat

You can cash in on this battle. On top of second mortgages, fuel companies now offer appliance rentals, other attractive gimmicks . . .

By W. L. DACK

The battle for Canada's residential fuel market is developing into a bitter, knockdown fight with few holds barred.

The adversaries:

- **Long-entrenched fuel oil,** determined to hold its leading position in house-heating.
- **Natural gas,** the brash young contender, launched on a multi-million dollar budget that must produce quick returns.

The in-fighting has been getting sharp, is producing some of the most unique marketing dodges in fuel industry history:

- **Second mortgage** offers to builders are spreading.
- **Now, gas appliance** installations are being offered on a monthly rental basis.

This week three big eastern gas utilities—**Consumers Gas Co.,** Toronto, **Union Gas Co. of Canada,** Chatham, Ont., **and United Fuels,** Hamilton—all started offering gas furnace conversion jobs on a rental basis, as a spur to customer switch-over.

The rental charge—from $2.95 to $3.60—is tacked onto the monthly gas bill.

On outright customer purchase, the monthly payments are credited against the purchase price.

United Fuel is even going one further. It's offering a $50 trade-in allowance on an old oil burner.

Fuel oil dealers, staggered by this latest counter blow, are now studying plans for getting into the rental business themselves.

But with the necessary fuel tank and more mechanical parts involved they don't see how they can match gas's low monthly offer.

They might stretch out current easy payment plans on fuel oil equipment from the present five to a seven-year period.

Gas men introduced the new rental deal to quicken pace of gas furnace installations, and they see the offer appealing particularly to:

- **Tenants** in rented houses who want to switch to gas, particularly if present heating system uses hand-fired coal.
- **Home-owners** who have already installed one or more other gas services; can now lower over-all gas cost by adding heating load.
- **Householders** with capped services (never converted to natural gas when manufactured gas service was discontinued).

Gas distributors jumped into the rental business first on their most solid competitive ground—automatic water heating.

Virtually every major gas

(Continued on page 8, col. 4)

Hydro Heat: Bigger Sell Coming Soon

By FORBES GILBERTSON

Stand by for a bigger sell in electric heating.

Training programs starting April 1 throughout Ontario may begin pushing electricity into the heating battle in a big way.

Ontario Hydro has ambitious plans to expand electric heating, but it needs trained sales staff.

Its new plan will turn out municipal utility men and Hydro staffers trained specifically to sell electric heat to homeowners and businessmen.

Ontario Hydro expects at least a 50% increase in commercial and institutional installations this year — not large in the overall picture but a clear trend.

It isn't a real threat in the heating field yet, but electric heat exponents see a future when it will be a big competitor.

These are the latest developments in the electric heat field in Ontario:

- **About 375 new homes** using electric heat were completed in 1959.

In 1960, the figure is expected

(Continued on p. 9, col. 3)

How Much Boom?

The Outlook

An FP roundup of the latest facts and expert opinion on the economic weather ahead . . .

By DALTON ROBERTSON

THE MID-WINTER SAG in bank loans and borrowing costs contrasts sharply with the buoyant financial trends of a year ago and may well be a sign that some of the steam is going out of the current boom.

Bank loans to individuals and to business subsided, in total, by $128 million during December, 1959, and then slid off by another $83 million over the first six weeks of 1960.

To some extent this reflects today's monetary stringency. But in drifting down right now, loans are hewing close to the normal seasonal pattern. This in itself may well be a prediction that the pace of 1960's economic advance will be measured and stable.

A year ago, when recovery was just nicely under way, bank loans suddenly began to move upward despite seasonal expectations. This was an early sign of the big borrowing splurge that took place over the first eight months of last year and an earlybird indicator of the solid business expansion that followed.

This year's decline in loans has been accompanied by a fairly substantial change in the cost of borrowed money—which, granted, may be a passing phenomenon. The yield on 91-day treasury bills, for instance, declined from 5.12% at year-end to 4.75% on Feb. 11—a drop of 7.2%. The yield on a typical medium-term government bond edged down from 5.79% at year-end to 5.54%. And last week one sales finance company cut the rate on shortest-term borrowing by a total of ½%. Another cut most of its rates by ¼%.

By contrast, rates were on the uptrend a year earlier; the

(Continued on page 8, col. 4)

HARRIS TWEED

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Superior Buys Bescom Division

Superior Propane Ltd. has purchased the carburetion division of **Bescom Corp.** of Montreal. This Bescom division have been pioneers and leaders in the field of propane carburetion in Quebec for a number of years, Superior Propane says.

Purchase consists of all existing stock, fittings, carburetors, service and gas contracts as well as the gas storage and utilization equipment. Superior is the largest propane distributing firm in Eastern Canada.

MANSUR RESIGNS

David B. Mansur, one-time head of **Central Mortgage & Housing Corp.**, has resigned as president of **Consolidated Toronto Development Corp.** to enter the private capital investment field on his own account. New president is Jean Lambert, New York. G. D. Wotherspoon has become a director to fill vacancies in affiliated companies caused by Mr. Mansur's resignation.

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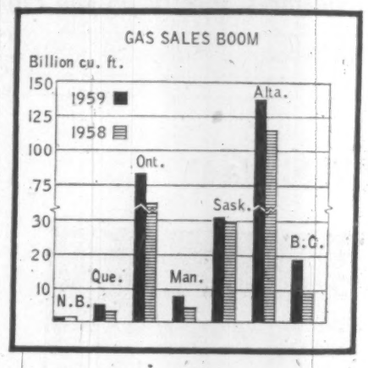
Trend of Business

Sales of natural gas jumped 37% to 282 billion cu. ft. in 1959 from previous year's 207 billion cu. ft. and revenues rose 39% to $159 million ($115 million). Biggest sales gain was in Ontario to 83 billion cu. ft. (51 billion in 1958). Alberta remains largest consumer province, using 136 billion cu. ft. vs. 116 billion year before. Sales to domestic consumers rose 31%, to industrial consumers 49%, and to commercial users 16%.



Carloadings declined 4.4% in January from year ago to 268,585 cars (280,936 last year). Principal commodities moved in smaller volume: wheat, 16,795 cars (20,103 year ago); other grain, 6,813 (11,904); coal, 15,949 (18,690); and l.c.l. merchandise, 34,008 (42,266). Loaded on more cars: non-ferrous metals, 2,904 (1,804); logs, posts, poles and piling, 6,578 (4,447); pulpwood, 15,779 (13,689); miscellaneous, 25,141 (21,465).

Sell more radio, fewer TV sets. Producers sold more radio receiving sets (770,285) in 1959 than in any year since 1950, while sales of television sets declined for the fourth successive year to 405,006 units, sharply below 1955's record 806,253 units. Record-player sales declined for the second year to 202,114 units vs. 220,558 in 1958, 243,153 in 1957.

Less Canadian coal was mined in 1959 than in any year since 1909. Year's output of 10.5 million tons was down 9.7% from 11.7 million tons in 1958. Imports rose 2% to 13.6 million tons (13.4 million in 1958). Last year's production was larger in New Brunswick and Alberta, smaller in Nova Scotia, Saskatchewan, British Columbia and the Yukon.

Wheat exports ahead of last year. Overseas sales of Canadian wheat in period Aug. 1-Jan. 27 rose 5.4% to 126.8 million bu. from 120.3 million bu. a year ago. Visible supplies in all Canadian positions at Jan. 27 aggregated 382 million bu., up 1.1% from year-earlier total of 378 million bu.

Record electric energy output. Net generation of electric energy rose 7.3% to 103,844 million kwh in 1959 (96,745 million kwh year before). Canadian output has more than doubled in the last decade. Imports jumped last year to 511 million kwh from 1958's 244 million kwh while exports of electric energy rose 12% to 4,583 million kwh.

Major Weekly Indicators

	Latest or Week	Date Ended	Previous Week	Change from Month ago %	Change from Year ago %
Passenger car production	(Feb. 13)	6,813	6,349	— 22.6	— 17.0
Truck production	(Feb. 13)	1,571	1,852	— 10.5	+ 10.4
Bus. fail. 4-week moving av. (no.)	(Feb. 4)	44.0	35.8	+ 81.0	+ 50.2
Steel ingot production (tons)	(Feb. 6)	124,581	127,205	— 1.8	+ 15.2
Steel production (% capacity)	(Feb. 6)	96.4	98.4	— 1.8	+ 8.3
T.S.E. industrial index	(Feb. 16)	495.85	509.73	— 4.6	— 6.7
Yield 114 stocks	(Feb. 15)	4.67%	4.64%	+ 3.5	+ 17.3
Chartered banks					
Personal savings ($ millions)	(Feb. 3)	6,974	6,876	+ 1.4	+ 0.4
Loans outstanding ($ millions)	(Feb. 3)	6,041	6,024	— 2.3	+ 12.1
NHA mtge hldgs. ($ millions)	(Feb. 3)	974	971	+ 0.9	+ 21.0
Bank clearings:					
Montreal ($ millions)	(Feb. 12)	797	1,229	— 10.1	+ 2.8
Toronto ($ millions)	(Feb. 12)	1,216	1,634	.....	+ 6.8
Cdn. dollar (U.S. cents av.)	(Feb. 16)	105.028	105.028	.....	+ 2.8
Carloading totals	(Jan. 31)	*85,531	67,219	+ 7.9	— 10.8
Eastern Canada	(Jan. 31)	*56,731	43,738	+ 6.6	— 10.6
Western Canada	(Jan. 31)	*28,800	23,481	+ 10.4	— 11.1
Iron and steel mfg.	(Jan. 31)	* 1,962	1,412	+ 16.9	+ 11.7
Ores, concentrates	(Jan. 31)	* 4,212	2,958	— 7.5	— 14.7
Base metals	(Jan. 31)	* 971	732	+ 14.1	+ 50.3
Lumber, timber plywood	(Jan. 31)	* 4,742	3,535	+ 20.5	— 8.7
Cement	(Jan. 31)	* 196	181	+ 7.1	— 40.4
Bank of Canada holdings of					
Securities ($ millions)	(Feb. 10)	2,549	2,550	— 5.6	— 0.2
Short-term govt. ($ millions)	(Feb. 10)	652	656	— 19.1	+315.3
Long-term govt. ($ millions)	(Feb. 10)	1,820	1,817	+ 0.1	— 21.6
Other securities ($ millions)	(Feb. 10)	18	18	— 5.3	— 21.7
Department store sales % change from year earlier	(Feb. 6)	+0.7	—0.6	+ 7.3	+ 6.1

*Ten-day end-of-month period.

Facts by the Month

	Latest Month	One Month Previous	Change From— Two Months Ago %	Change From— Year Ago %
WHAT WE PRODUCE—				
In all industries (Index)	Nov.	171.0	175.1	—0.4	+6.6
In factories (Index)	Nov.	132.1	137.5	—1.1	+3.5
Total nondurable goods (Index)	Nov.	155.5	157.5	—1.6	+2.2
Food & bev.	Nov	153.2	160.4	—10.0	—2.5
Textiles	Nov	129.2	128.8	+1.2	+1.8
Clothing	Nov	116.1	120.2	—1.6	—0.2
Chemical products	Nov	200.4	208.7	+1.5	+2.0
Total durable goods (Index)	Nov	148.2	137.4	—0.5	+5.3
Iron & steel products	Nov	135.8	139.8	+0.4	+23.3
Primary iron & steel	Nov	193.2	194.7	+7.6	+59.4
From mines (Index)	Nov	264.5	273.4	—5.2	+17.7
Metals	Nov.	209.3	221.3	—7.4	+28.0
Nonferrous smelting, refining	Nov	155.1	152.7	+3.0	+44.3
Gold	Nov	117.4	111.4	+11.1	+3.8
—From farms					
Cattle delivered (000)	Nov	156	150	—16.1	—4.3
Hogs graded (000)	Nov.	649	591	—20.1	+7.8
Grain mill products (Index)	Nov	141.0	140.0	+7.7	—8.0
—From sea					
East Coast catch ($000)	Dec.	4,270	1,768	+29.7	+44.2
W. Coast catch ($000)	Dec.	1,877	2,511	—47.9	+25.9
—From forests					
Newsprint (000 tons)	Dec.	538	563	—9.3	+13.0
Pulp (000 tons)	Dec.	887	930	—10.1	+12.6
—In powerhouses					
*Electricity (million kwh.)	Dec.	9,750	9,327	+8.0	+10.3
WHAT WE SELL—					
Retail sales ($ millions)	Nov.	1,322	1,429	+1.6	+0.7
Dept. store sales ($ millions)	Nov.	152.5	134.6	+20.5	+3.7
Wholesale sales ($ millions)	Nov.	643	719	—8.7	+1.9
Mfrs. outstg. orders ($ millions)	Nov.	2,200	2,195	—1.4	+5.5
Pass. car sales (units)	Nov.	28,333	31,834	+13.8	+7.8
WHAT'S ON HAND—					
Mfrs. inventories ($ millions)	Nov	4,421	4,445	—1.0	+1.2
Dept. store stock sales ratio	Nov.	2.2	2.5	—12.0	+4.8
SPENDING, SAVING POWER—					
Labor income ($ millions)	Nov	1,516	1,550	—2.5	+7.3
Dividend payts. (Index) (annual rate)	Jan	316.7	315.5	+1.4	+5.2
JOBS—					
Persons with jobs (000)	Dec.	5,861	5,951	—3.2	+3.2
Jobless seeking work (000)	Dec	370	296	+56.1	—15.9
Do. (% of labor force)	Dec.	5.9	4.7	+55.3	—18.1
CONSTRUCTION—					
Contract awards ($ millions)	Jan	214	169	—31.4	+20.2
FOREIGN TRADE—					
Exports ($ millions)	Dec.	487	499	+3.2	+8.2
Imports ($ millions)	Dec.	451	490	—9.1	+5.9
MONEY—					
Money supply ($ millions)*	Nov	12,610‡	13,164	—3.5	—1.7
Cheques cashed ($ millions)	Nov	22,622	22,496	+10.8	+17.5
*Life insurance sales ($ millions)	Dec.	633	574	+37.3	+21.2
*Notice deposits ($ millions)	Dec.	7,458	7,453	—4.5	—0.1
Current public loans ($ millions)	Nov	6,260	6,211	—0.1	+17.5

*Total deposits less Govt. of Canada deposits less float, plus notes in circulation outside the banking system. ‡Preliminary.

PRICES—					
Consumer prices (Index)	Jan.	127.5	127.9	—0.6	+1.1
Wholesale prices (Index)	Jan.	230.5	229.8	+0.1	+0.3

STRATEGIC MATERIALS—Production and Supply—	Latest Month	Month yr. ago	Yr. to date	% chge. yr. to date
*Steel ingots and castings (000 tons)	Dec.	550	427	5,921.7	+36.3
Nickel (000 tons)	Nov	16.9	2.9	167.6	+22.9
Primary copper (000 tons)	Nov.	35.3	20.1	364.9	+11.8
Lumber exports (millions fbm.)	Oct.	345	421	3,336.1	+9.3
Lumber (millions fbm.)	Oct.	611	630	6,349.0	—0.2

*New item this week.
Index based: production 1949=100; consumer price index 1949=100; wholesale price index 1935-39=100.

Date of issue for your file, The Financial Post, Feb. 20, 1960.

Tractor Prices Steady, But Some Implements Up

Prices of some lines of farm equipment in Canada have been increased by 2% to 4% in recent weeks.

Tractors and other major items are unchanged, but major implement manufacturers say that they may not be able to hold the line indefinitely.

An across-the-board price hike hinges on steel prices. An increase in the cost of steel is generally expected to be the result of the wage increases which followed the end of the recent lengthy U. S. steel strike.

Some industry men think that any increase in steel prices may be postponed until after the November presidential elections.

Cockshutt Farm Equipment Ltd., Brantford, Ont., increased prices of a few items, chiefly tillage equipment, by about 2% to 4% early this month.

General Manager J. J. Phillips said that profit margins have been narrowed in the past year by wage boosts and "consistent increases in various material costs".

International Harvester Co., Hamilton, Ont., has raised prices by about 2% to 3% on several lines, including tillage equipment. About five models of tractors remain unchanged. There have been some price reductions on such items as grain drills and hay tools.

Massey-Ferguson Ltd., Toronto, has not changed its prices; one factor is that new wage contracts were negotiated more than a year ago. "Naturally, we are studying the effects of the steel strike," a spokesman said.

Fanny Farmer Net Up 5.2%

Fanny Farmer Candy Shops Inc., Rochester, N. Y., net profit of $345,000 for the 26 weeks ended Dec. 26, 1959, was 5.2% ahead of $328,000 in corresponding 1958 period.

Earnings were equal to $1.02 (97c) per share.

Income in 1958 included a non-recurring capital gain of $67,000 (20c per share).

Sales for the six months rose 5.4% to $10,340,000 ($9,809,000 year before).

January sales were ahead of a year ago, and outlook is for this trend to continue through the second half of this fiscal year, President L. D. Griffiths says.

There were 407 Fanny Farmer shops in operation in the latest period, two more than a year earlier. At Dec. 26, 1,104 agencies were in operation (461 at end of 1958).

Increased sales in the latest period came from the agency division; sales in Fanny Farmer shops were equal to a year ago.

ANNOUNCEMENT

GENERAL STEEL WARES APPOINTMENT

H. E. YARDLEY, C.P.A.

Mr. S. J. Randall, President of General Steel Wares Limited, has announced the appointment of Mr. H. E. Yardley as Vice-President and Comptroller of the company.

Mr. Yardley has had wide experience in accounting, auditing and finance both in U.S.A. and in Canada. Mr. Yardley who is a Canadian by birth has spent the past nine years in U.S.A. He is a member of C.P.A. Association of Ontario, National Association of Accountants, former member of Board of Governors of C.P.A. Association of Ontario and Past President of C.P.A. (Ontario) Student Body.

Mr. Yardley will be located in the Head Office of General Steel Wares in Toronto.

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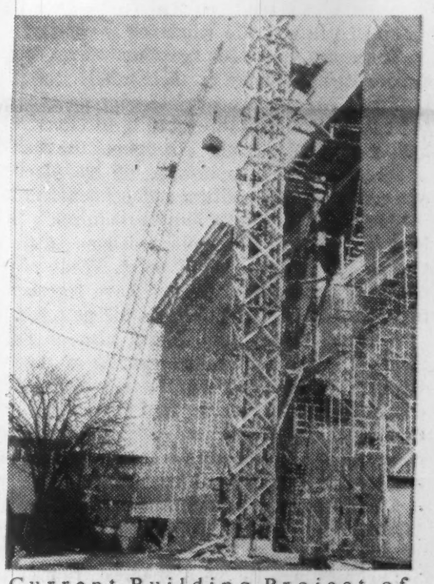

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'World's Uranium Capital' Gets Hopes Badly Battered

What happens now to Elliot Lake, Ont., the town that represents a $400 million investment?

By FRANK KAPLAN

The pioneers of the modern planned town that was to become the "uranium capital of the world", had their future laid out in detail this week.

The final blow in a series of problems that battered the hopes of some 25,000 people in Elliot Lake, Ont., came with the detailed schedule of production by the **Rio Tinto Mining Co. of Canada** group of mines.

(See also p. 46.)

Today Elliot Lake knows the score as it fights for a continuing future.

Briefly, this is what will likely happen to an area that represents a combined mine, government and community investment of some $400 million.

Its future can be measured in jobs available in the mines.

● **This year,** employment will shrink from around the 9,000 level to less than 5,500 in 1961.

Rio Tinto alone will likely close down Lacnor, Panel, Milliken and Pronto uranium mines, reducing its work force from some 4,900 to about 1,800.

Pronto swings over to work on the Pater copper property.

Only two Rio Tinto group mines will be working on uranium — Quirke and Nordic.

And **Can-Met Explorations** will stop producing soon.

● **The next blow** will likely come in the spring of 1963 when **Stanrock Uranium Mines** and **Stanleigh Uranium** are expected to complete their contracts.

That will end another 1,600 jobs.

● **Late in 1964, Consolidated Denison** will likely complete its own contract and Can-Met's (**FP**, Feb. 6, 13).

That could end another 2,000 jobs.

● **In 1966,** Rio Tinto expects to have only one mine going until the end of November when it will have cleaned up all contracts.

● **The only operation** in the Blind River area at the end of 1966 could be copper production from Pronto's property on the north shore of Lake Huron.

This mine site is near the rail line and Trans-Canada Highway, some 35 mi. from Elliot Lake.

There are some possible events which could change this schedule.

▸ **Sale of Stanrock and Stanleigh contracts.**

If these are sold to Elliot Lake mines, it could mean a stretching out of production and jobs from 1963 to 1966.

But if any should be sold to producers in other camps (Beaverlodge or Bancroft), it would mean a steeper fall in jobs available.

▸ **A general increase in demand** for uranium by countries like Japan, Italy, India or even a return of buying interest from the U. K. and U. S. would put Elliot Lake on a stable footing.

The mines are trying to develop markets but their success depends on breakthroughs in use of uranium in power reactors.

▸ **Efforts of Elliot Lake businessmen** and the remaining mines to obtain alternative industries that might be related to uranium.

R. C. Hart, chairman of the trustee board running the town, points out that Elliot Lake has a large number of skilled chemists, metallurgists, laboratory technicians who could fit into a nuclear research establishment.

Community representatives have been pressing federal officials to switch the planned Whiteshell, Manitoba centre to Elliot Lake (**FP**, Feb. 13). And there are other attempts being made.

Today Elliot Lake itself represents investment of $65-$70 million by federal and provincial governments and individuals, Hart points out.

This investment is in homes, businesses, schools, churches, roads, hospital, hydro lines, water and sewers and the multitude of things that make up a community.

Some of this investment would be necessary in any case even for a few mines, but there is little doubt that there will be losses as the mines close.

The areas hurt work out something like this.

● **Employees are most obviously affected** since they will have to shift out of the community.

In the case of Rio Tinto, hourly-rated help gets up to $400 on the basis of $6 for each month of service.

But in the case of employees who purchased homes, Rio Tinto is committed to buy them back after allowing for depreciation.

Rio Tinto subsidiaries have more than $6 million of potential housing obligations.

Mortgages are with Central Mortgage & Housing but the mining companies must make deposits which back up the CMHC guarantee to lenders.

● **At Can-Met, repurchase clauses have expired** covering the some 90 houses owned by employees.

But both Consolidated Denison and Can-Met (like Rio Tinto companies) have undertaken to make deposits which build up a fund, guaranteeing payback of mortgages to the lenders.

The effect of the housing mortgage arrangements is to protect lenders with both CMHC and then the mines backing up the obligations.

Generally, the mines sold houses to men with families on a basis of $500-$650 down payment.

Many homes were sold below cost in an effort to attract skilled labor.

Second mortgages were given by some mines with interest rates of 3% where the housing corporation paid 6%.

Equity of homeowners, generally, is small.

However, there is a group of home-owners who are not employed by the mines and who have built homes with mortgages not guaranteed by mines.

It is believed that CMHC has some 400 such mortgages and there may be others where conventional financing was used.

These people usually are small businessmen or employees in the commercial area. They will be hard hit.

● **Commercial areas are likely to be hardest hit** since small businessmen had to arrange their own financing and many had difficulty because of the absence of any government or mine guarantee.

However, early pioneers are believed to have recovered their investment rapidly.

But duplication of hotel facilities, restaurants, theatres meant heavy competition for business and put late starters at a disadvantage.

Generally, equity interests are considered to be substantial and some businesses like the **Hudson's Bay Co.** and the theatres have the credit of national organizations to draw on.

There are also operations like **Noranda Mines** acid plant at nearby Cutler, Ont., which are suppliers to Elliot Lake uranium mines. Operations will have to be reduced unless other markets can be developed.

However, there have already been some business failures (restaurants and a ready-mix cement firm) and there is a panic atmosphere in the business community.

● **For the town,** there is $15 million of borrowings from the Ontario government which helped provide the essential services.

These obligations will have to be met by a considerably-shrunken community.

At least the equivalent of one 10-room school will likely close by the end of the year.

And the shrinking will continue unless new uranium business or alternative industry is developed.

Elliot Lake is generally considered a uranium boom town.

But the planning and development of this community was based on the idea of establishing a permanent base for operations of any industry in the Algoma basin area between Sudbury and Sault Ste. Marie.

Because of overcrowding (210 basement apartments), heavy renting of rooms in residences, use of trailers (5,000 at mines and town), Elliot Lake had to do double duty.

Planners designed the community in two phases — the first to be capable of supporting 12,000 population.

The second area has not been developed because it soon became evident that the town's future was clouded.

Instead Elliot Lake is providing strained modern facilities for 25,000.

An employment force of 5,000 was considered to be ideal and eventual. The original plan still stands.

Right now Elliot Lake is in a panic atmosphere.

With the uranium production and job pattern becoming clear, it is likely that a more knowledgeable and careful examination of the town's future potentiality will be possible.

This could lead to an assurance of reasonable permanence.

No one — mine owners, government officials, citizens — is going to throw away or even walk away from a $3.25 million hospital, 10 schools, 12 churches, 2,400 homes, five banks, three hotels and everything that makes up "Canada's most modern small city".

Not without a fight.

How Jobs Will Shrink

	Recent	1961	1963	1966
Algom	1,600	1,600	1,600	800
Northspan	1,800	....	....	....
Pronto	500	200	350	350
Milliken	775	....	....	....
Can-Met	800	....	....	....
Cons. Denison	2,000	2,000	2,000	....
Stanrock	850	850	....	....
Stanleigh	800	800	....	....
Totals	9,025	5,450	3,950	1,150

This is Elliot Lake:

Population: 24,900. Area: 390 sq. mi.
Homes: 2,337 private; 463 multiple.
Public schools: 6 with 1,886 pupils.
Separate schools: 4 with 1,587 pupils.
Secondary school: 460 pupils; recreation centre.
Hospital: 117 beds; cost $3,250,000.
Churches: 12. Hotels: 3. Theatres: 2.
Banks: 5. Television station: 1.
Businesses: 324. Telephones: 4,200.

The Investment Stake:

Residential	$ 27,582,000*
Commercial	10,950,000*
Industrial	1,440,000*
Mine sites	12,225,000*
Churches, hospital, separate schools, govt. property (tax exempt)	6,600,000
Town borrowings for services	15,000,000
Provincial highways	4,000,000
Mine plant (tax exempt)	325,000,000
TOTAL	$402,379,000

*Three times assessment value.

JOHN DAVIS SAYS:

Uranium Enrichment Plant Would Help Sell Our Ores

A uranium enrichment plant could be built in Canada for upwards of $200 million, about one third of the capital cost of existing U. S. installations.

This is the interpretation taken by John Davis, director of research and planning, **B. C. Electric Co.,** of a recent statement by the Atomic Industrial Forum in the U. S.

Such a diffusion plant, Davis said in a recent speech in New Westminster, B. C., can help solve one of Canada's more pressing export problems — the sale of uranium ores and concentrates.

At the same time a plant could increase Canada's export earnings by selling enriched uranium to the U. K., the Euratom countries and Japan, Davis said.

(Natural uranium contains 0.7% U-235 by weight. The rest is U-238. Davis envisages a plant capable of enriching to 2% or less of U-235, the fissionable isotope.

Atomic Energy of Canada Ltd. has concentrated on the development of heavy water moderated nuclear power reactors using natural uranium as fuel. Most nuclear power plants in other countries use enriched uranium.)

Davis said an alternative supply of enriched uranium would have considerable appeal to overseas countries.

Now these countries must buy their supplies from the U. S. Atomic Energy Commission, which is subject to the whims and fancies of Congress, he pointed out.

The European importer can only justify his immense investment in nuclear plant and equipment if fuel supplies are secure.

A purely commercial non-U. S. source of enriched uranium would step up demand as Europeans risked more money on reactor research and development and paid less attention to the production and recycling of plutonium, Davis said.

He suggested the Upper Columbia, the Peace River or Grand Falls on the Hamilton River in Labrador as possible sites for a plant, since the process requires a large source of electricity and remoteness is not a serious penalty.

Shook Mills Sold to Abitibi

Pembroke Shook Mills Ltd., a wholly owned subsidiary of **Canadian Canners Ltd.** of Hamilton, has been sold to **Abitibi Power & Paper Co.** of Toronto.

The Pembroke, Ont., firm was incorporated in 1912. It operates a corrugated box plant and a large wood shook plant. (Shooks are sets of parts of boxes, casks, barrels, etc.)

It also holds extensive forest limits in the Pembroke forest district.

Canadian Canners Ltd. is controlled by **California Packing Corp.,** San Francisco.

Ottawa's Atomic Enquiry Could Be Hot and Lively

OTTAWA (Staff)—The coming House of Commons inquiry into Canada's atomic energy and nuclear research programs won't be the first they have undergone, but it may well be the liveliest.

The inquiry stems from a motion placed on the Commons order paper by Trade Minister Churchill.

A 20-member committee to study the operation of **Atomic Energy of Canada Ltd., Eldorado Mining and Refining** and National Research Council is planned.

All three parties will be represented on the committee which is expected to begin operations next month.

The committee will likely concentrate on AECL and Eldorado, deal only superficially with NRC — because the liveliest issues are to be found in the activities of the first two crown companies.

Operations of the government's three main research institutions were studied by parliamentary committees in the 1952-53 session, and again in 1956.

These inquiries attracted relatively little attention at the time because none of the operations of the three bodies had come under much criticism.

But in the last six months, several aspects of Canada's atomic energy, nuclear research and uranium mining programs have been publicly questioned.

Here are four issues which will attract the attention — and the questions — of MPs:

● **Charges by Winnett Boyd,** a Montreal engineer, that AECL erred by its decision to base Canada's atomic power program on plants using natural uranium as a fuel and heavy water as the control and heat-transfer agent (**FP**, Oct. 24).

● **B. C. Electric and Peace River Power Co.** have questioned AECL's contention that building a diffusion plant in Canada to produce enriched uranium is not economically feasible.

● **The government's stretch-out plan** to keep the uranium mining industry in operation after current U. S. and U. K. uranium contracts expire in 1962 and 1963 has been widely criticized.

● **The Liberal opposition** has argued that the new atomic research centre be built at Elliot Lake, Ont., instead of at Whiteshell, Man.

Both AECL and Eldorado will likely set out their positions on these issues in detailed briefs with which the MPs can wrestle.

Manitoba Bids for Lower Freight Rates for North

From Our Own Correspondent

WINNIPEG — Unless the freight rate structure is revised prospects are not encouraging for early establishment of a newsprint and wood pulp industry in northern Manitoba (**FP**, Jan. 23).

Industry and Commerce minister Gurney Evans suggested as much at the Royal Commission on Transportation hearing here last week.

Several groups are said to be interested but are holding back until there are more favorable rates to Canadian and U. S. markets. Evans suggested the commission:

● **Examine** the impact of the present freight rate structure on development of Canada's north, including northern Manitoba.

● **Investigate** a northern development freight rate subsidy for shipments to and from northern regions.

These might be based on the principle underlying either the Maritime Freight Rates Act or the East-West Bridge subsidy.

What applied to forestry industries applies equally to mining, Evans said. Government policy, provincial and federal, was designed to encourage exploration, development and production, and establishment of smelting and refining plants for processing ores.

Without more favorable freight rates they couldn't be wholly implemented.

More favorable rates would encourage active participation by smaller and medium-sized companies and thus make possible a broad-based northern industry.

At present only ore of top quality can be economically mined in the north. High transportation costs were having detrimental effect on established base metal mines, Evans said.

In the long run this would result in less incentive to re-invest in similar projects.

Extension of highways from Winnipeg to The Pas and Flin Flon and intermediary supply centres had brought competitive rail rates for consumer goods in these communities. Farther north, in communities like Lynn Lake, substantially higher rates were in effect with resulting higher prices for consumer goods. Maximum use of the port of Churchill could never be made under existing rail freight rates, Evans said. Any growth in import traffic, must depend on lower rates for southbound shipments.

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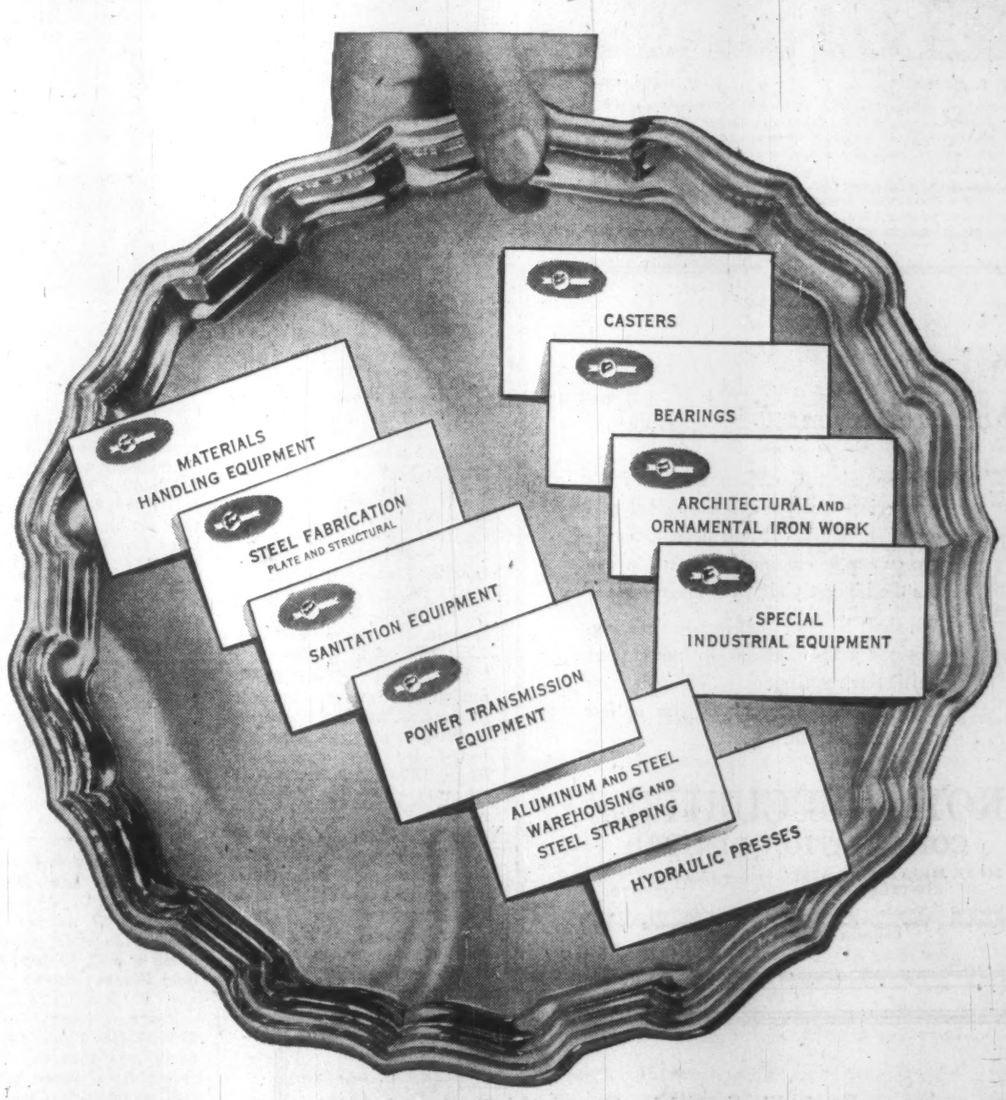

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It contains an explanation of the 20% Dividend Tax Credit and of the Depletion Allowance. Also included is a list of companies, whose shares are widely held, upon which the depletion allowance applies.

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EUROPEAN TOYS

A Canadian toy manufacturer is looking for European games or toys to produce in its Toronto plant. **Collett-Sproule Boxes Ltd.**, is sending Elliot Thomas, sales manager of its game division to Nuremberg, Germany, to attend the annual European Toy Fair early in March to search for products suitable to its cardboard and paper operation.

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ANNOUNCEMENT

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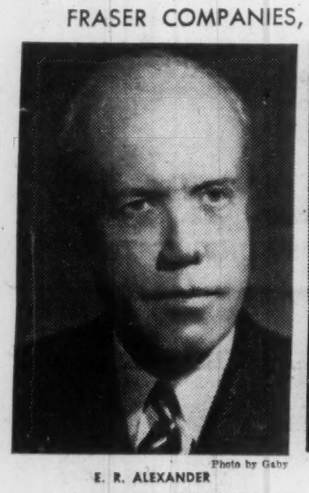

Photo by Gaby

E. R. ALEXANDER

K. W. MATHESON

E. R. Alexander, Montreal, and K. W. Matheson, Edmundston, N.B., were recently elected directors of Fraser Companies, Limited.

Mr. Alexander is vice-president, finance, and director of the Sun Life Assurance Company. He is also a director of Lord Simcoe Hotel, Ltd., and other companies.

Mr. Matheson is vice-president, Fraser Companies, Limited. He is a member of the Bar of New Brunswick and has been associated with the Fraser organization since 1933.

BONDS
For Investment

The soundest Canadian bonds of all categories—federal and provincial government, municipal and corporation—are currently obtainable to give investors the highest yield in many years.

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Montreal, Hamilton, Toronto, Winnipeg, Halifax, Calgary, Charlottetown, Saint John, Edmonton, St. John's, Nfld., Quebec, Vancouver, Ottawa, Victoria

60-11

How Chain Stocks Have Dropped

	Price Recent $	Price May $	Earnings per sh. Latest $	Price/Earnings Recent	Price/Earnings May	Yield Recent %	Yield May %
Dominion Stores	45¾	80	4.18	10.9	18.5	2.73	1.50
Loblaw Cos. B	25	34½	2.97	8.4	11.4	1.60	1.16
Steinberg's A	21½	33	1.13	19.0	33.3	1.86	1.21
Horne & Pitfield	4.40	11	0.31	14.2	35.5	‡1.7	...
Kelly Douglas A	7	10⅜	0.54	13.0	21.2	3.57	2.41
Loeb	7⅜	14½	0.35	21.1	41.4	2.72	...
Oshawa Wholesale	6¾	†8.50	0.41	16.5	20.7	...	...
Shop & Save*	7¾	12½	0.40	19.4	31.3	1.61	

*Adjusted for 2-for-1 split.
†Offering price, Sept./59.
‡Based on initial interim dividend.

INVESTMENTS

Customers Stream to Chains But Investors Pass Them Up

By PAUL S. DEACON

WHEN ONE thinks of fashion, the most frequent idea-association is with women's clothes.

Nowhere, however, is fad or fashion followed with more slave-like devotion than in the stock market.

The popularity of a stock can rise or fall with greater suddenness than even the fastest moving hemline.

A prime example at the moment is the food chain group.

A year ago, the stocks of these mass marketers were still being heralded as growth stocks with a virtually unlimited future. Sales and earnings were rising with a persistence that made investors grab eagerly for both new issues and old ones.

Today, these same stocks appear almost friendless. They are selling frequently at prices little more than half their year-ago levels. They seem to have disappeared from the market letters and recommended lists of most brokers, investment dealers and advisory services.

One reason, of course, has been the general weakness of all stock prices.

The drop in food chain stocks has been much greater than for stocks in general, however. In period since May the Dominion Bureau of Statistics index of 92 stocks has declined 5%, a group of food chain stocks has plummeted 38%.

The major reason, undoubtedly, has been the downward pressure on food chain profit margins.

Sales have continued to climb, but earnings have fallen back as rising costs and aggressive competition more than offset the gains in total revenues.

Perhaps the most abrupt and most widely noted change in supermarket fortunes was the sudden drop in first half earnings of **Dominion Stores** (its fiscal year ends in March). Earnings per share dropped 17% to $1.68 ($2.02) despite a 27% gain in sales, thanks to a decline in profit margins to 1.42c per dollar of sales (2.07c in comparable 1958 period).

The drop in profit margins wasn't quite as sharp as this appears, because it was already well under way in the October-March half of Dominion's fiscal year. The company's after-tax return on sales in that second half was 1.72c per dollar of sales.

Dominion's competitors do not publish interim financial statements, but there is little doubt that all have been affected by the stepped-up competitive struggle that has whittled Dominion's earnings.

On the other hand, there are some special factors that may have made Dominion's experience more severe than that of some others.

For instance, the big chain reacted sharply to trading stamp competition, first in Quebec and later in Ontario. In addition to paring prices, last January it went into the stamp business in Quebec, with all its attendant costs. It stepped up its advertising and promotion expenditures in other ways too.

This put a heavy load on its operations in the latter part of its 1958-59 fiscal year, and in the first half of this year.

Dominion has stayed out of stamps outside of Quebec, but has battled through price and other forms of promotion. Although stamps in Ontario didn't affect first half results until nearly the end of the period, the entry of **Steinberg's Ltd.** into the Ontario market in June through the purchase of **Grand Union - Carroll's** 38 stores heightened the competitive struggle.

As President T. G. McCormack pointed out when he announced Dominion's first-half results, the normal increase in costs was aggravated by the widespread use of "unsound competitive devices" which had to be countered promptly in order to protect the company's position.

In the latter part of 1959, trade sources say the situation simmered down somewhat. Advertising and promotion expenditures, for instance, returned to a more normal level.

Nevertheless, it looks as though Dominion may be lucky to earn much more than perhaps $3 - $3.25 a share vs. $4.18 in the year ended March 21, 1959. It also seems likely that its competitors will find it difficult to match their 1958-59 showings, although some think they will be back on the rails by the time full year earnings are in.

The stamp proponents, such as **Loblaws**, for instance, claim that the boost in their sales since their entry into stamps will offset the added costs of the stamp operation.

The Independent Grocers' Alliance wholesalers (most of whom have an interest in retail outlets as well) say that earnings are up as well as sales (see separate story).

The squeeze on profit margins and the level of interest rates may affect the rate of food chain expansion at least temporarily. Chain officials are loath to commit their firms to present interest rate levels over a long period, and have been leaning fairly heavily on bank credit.

Just recently, however, **Loblaw Leased Properties Ltd.** and **Steinberg's Properties Ltd.** have issued 25-year debentures at yields of 6.84% and 7%, respectively.

Whether the chains will continue to borrow at such rates or slow down their building programs for a while, remains to be seen.

Most chain officials think there is still room for growth ahead. They think the profit margin picture will sort itself out, perhaps not at previous levels but nevertheless high enough to produce attractive earnings.

If their hopes are realized, investors may decide that their recently discarded favorites were thrust aside too soon.

Note

By VINCENT EGAN

PRICE IS PAR on both of this week's major offerings — **Canadian Chemical Co.** $15 million 7% 20-year debentures with warrants, and $12 million **British Columbia Telephone Co.** 6¼% preferred stock (**FP**, Feb. 13).

Nesbitt, Thomson & Co. and **Wood, Gundy & Co.** head the syndicate offering the Canadian Chemical borrowing; **W. C. Pitfield & Co.** head the other syndicate.

* * *

Province of **Saskatchewan** plans to issue $7.5 million 20-year 6% bonds, with proceeds going to the Power Commission.

* * *

Metropolitan Toronto will borrow $41 million in the U. S., according to a statement filed with the SEC this week.

* * *

A. E. Ames & Co. of Toronto and **Lee Higginson Corp.** of the U. S. have placed privately $7 million (Canadian) 15-year promissory notes of a U. S. firm, **Household Finance Corp.**

* * *

Progress report issued by **Thorncliffe Park Ltd.** this week said that the Toronto realty firm would probably require additional equity financing . . . Unconfirmed rumors suggest financing by **Dominion Tar & Chemical Co.** and **General Motors Acceptance Corp.**

* * *

An issue of 30,000 par 1c common shares and 30,000 stock purchase warrants of **Analogue Controls Inc.** of Hicksville, N.Y., has been placed privately by **Annett & Co.** at $10 per unit of one share and one warrant.

Warrants are exercisable at $10 a share until Oct. 31, 1964, the price increasing $1 annually for five years. Recent price of stock was $6½, warrants $3.05.

* * *

It is expected that a syndicate headed by **Graham, Armstrong Securities Ltd.**, Montreal, will offer 112,500 common shares of **Soca Ltee.** at par of $2. Another 637,500 shares have already been placed with a European banking group which controls the Quebec corporate farm.

Finance Co. Dividend Cut

Interprovincial Building Credits, Ltd., Toronto, will not pay any further dividends in current fiscal year which ends Feb. 29.

In a letter to shareholders, President E. M. Henry says the decision was made in order to conserve working capital. The accounts to be submitted to the annual meeting will show company to be in sound financial condition, he states.

Disbursements this fiscal year total 47½c per share vs. 70c last year and 85c in year ended Feb. 28, 1958.

Dividend policy will be reviewed in the coming year.

Current fiscal year's results will reflect provision for certain special and non-recurring losses, Mr. Henry says. Particulars of these losses have not yet been disclosed.

Company had net profit of $1 per share in year ended Feb. 28, 1959, vs. $1.06 year before.

CORPORATE INVESTORS LTD. class A shareholders wishing to have the company re-invest their dividends, must hold a minimum of 100 shares in future. Present shareholders of the mutual fund will not be affected by the new ruling.

Underwriters Elect Officers

Annual meeting of Life Underwriters Association of Canada has elected Roger Martel, Montreal, as president of the 10,000-member organization for 1960.

DEACON

Martel is with **Alliance Mutual Life Ins. Co.** Other officers elected: C. B. Lindsay, Vancouver, **London Life**, president-elect; Fraser Deacon, Toronto, **Canada Life**, board chairman; D. A. Donaldson, Toronto, London Life, board vice-chairman; Fernand de Haerne, Montreal, **Global Life**, honorary secretary; John E. Manning, Toronto, **Mutual Life of Canada**, honorary treasurer; N. H. Evely, Toronto, **Prudential of England**, chairman, Institute of Chartered Life Underwriters.

In addition, 14 regional vice-presidents and 14 regional directors were elected.

Highlight of the meeting was the presentation of the John A. Tory Gold Medal for outstanding proficiency in completing a three-year course leading to the title "Chartered Life Underwriter" (C.L.U.) to D. Keith Shales of London Life.

Kelsey Plant Starting July 1

From Our Own Correspondent

WINNIPEG — First two units of the Kelsey hydro plant in northern Manitoba will go into action July 1 as scheduled, despite a serious fire.

A spark from a welding torch is thought to have started the blaze Jan. 31, which damaged walls and roof of the $15 million power house.

New material has been ordered for repairs and, with reasonably prompt delivery, the Hydro Electric Board expects generation will start as planned.

The loss, estimated at $1 million, is covered by insurance.

The agreement with **International Nickel** calls for power delivery from the first two units of 42,000 hp. each by July 1.

Work was well ahead of schedule when the fire broke out.

TIN MILL PRICES

The Steel Company of Canada, Limited, Hamilton, Ontario, announces Tin Mill Products, mill base prices, effective April 1, 1960, for the period ending September 30, 1960, as follows:

F.O.B. mill, mill base prices, 100 lb. basis weight, per base box.

Common Cokes	$10.60
No. 25 Electrolytic	9.10
Tin Mill Black Plate	8.30

ANNOUNCEMENT

DUNHAM-BUSH APPOINTMENT

D. M. GIFFIN

Dunham-Bush (Canada) Limited announces the appointment of D. M. Giffin as Chief Engineer.

Giffin, a graduate Mechanical Engineer of the University of Toronto, has been associated with Dunham-Bush for 7 years.

Home Oil
Convertible Debentures

Convertible into Trans-Canada Pipe Lines Limited common shares owned by the Company commencing August 1, 1960, at $27 per share until January 15, 1970, and at $32 per share thereafter.

Home Oil Company Limited is one of Canada's leading companies engaged in the exploration for and the production of crude oil and natural gas. The Company has interests in crude oil pipe lines and in gas processing plants in the Province of Alberta. We as principals offer:

Home Oil Company Limited
6% Convertible Subordinated Debentures
Due January 15, 1975
Price: 100 and accrued interest

Mail and telephone orders will receive prompt attention.

A prospectus will be forwarded upon request.

Wood, Gundy & Company Limited
Toronto Montreal Winnipeg Vancouver Halifax Quebec London Hamilton Ottawa Kitchener Regina Edmonton Calgary Victoria London, Eng. New York

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The successful applicant will assume a position with Carbide Chemicals Company, a Division of Union Carbide Canada Limited. His opportunities for personal advancement are particularly enhanced by the continuous and phenomenal growth of the product, polyethylene.

Enquiries are invited from men 25 to 32 years of age who are Engineering or Science Graduates, preferably with some previous sales experience or similar grounding.

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CARBIDE CHEMICALS COMPANY
Division of Union Carbide Canada Limited
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Money Market

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Equitable Securities Canada Limited
Toronto, Canada

and

Kleinwort, Sons & Co. Limited
London, England

announce that they have mutually agreed to dissolve their partnership as from February 12th, 1960.

These Secured Notes having been sold privately, this advertisement appears only as a matter of record.

New Issue

$1,000,000

UNION ACCEPTANCE CORPORATION LIMITED

7¼% Secured Notes, Series D

Dated February 15, 1960 To mature February 15, 1980

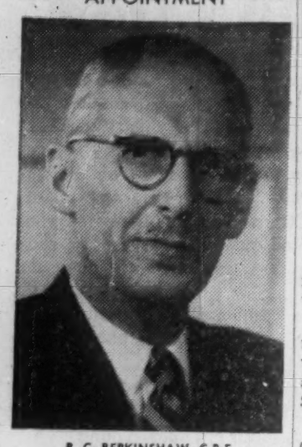
Price: 100 and accrued interest

BANKERS BOND CORPORATION LIMITED — **MILLS, SPENCE & CO. LIMITED**

DEACON FINDLEY COYNE LIMITED

ANNOUNCEMENT

CROWN TRUST APPOINTMENT



R. C. BERKINSHAW, C.B.E.

Crown Trust Company announces the appointment of R. C. Berkinshaw as a Vice-President of the Company.

Mr. R. C. Berkinshaw is Chairman of Goodyear Tire and Rubber Company of Canada, Limited, Vice-President of Mutual Life Assurance Company of Canada, Director of the Bank of Montreal and a Director of other Canadian companies.

LEITCH OUTPUT

Leitch Gold Mines produced $619,169 worth of gold bullion in the last half of 1959. A total of 17,505 tons of ore were milled with recovery averaging $35.37 per ton.

CITY OF TORONTO

PREPAYMENT OF 1960 REALTY AND BUSINESS TAXES

Taxpayers may purchase Tax Prepayment Certificates during February, March and April, 1960, on which interest at the attractive short-term rate of 5 per cent per annum will be allowed calculated from date of purchase to due date of the first instalment of taxes.

Purchase of these Certificates in any amount not less than $10.00, may be made by mail addressed to the Tax Office, Finance Department, City Hall, Toronto, or in person. Make cheques payable to the City Treasurer at par in Toronto. For tax billing purposes the City is divided into three districts of three wards each, as follows:

District 1—Wards 1, 2 and 3
District 2—Wards 4, 5 and 6
District 3—Wards 7, 8 and 9

Separate Prepayment Certificates will be issued for each of the above districts. Should properties be located in more than one district, a separate Certificate for each district must be purchased. It is possible, however, to combine, in one Certificate, prepayment of both realty and business taxes for the same property or taxes for more than one property or business located in the same billing district.

Upon determination by City Council of the due dates of taxes for 1960, each purchaser will be notified by mail of the amount of the allowance for interest, which amount will be added to the face value of the Certificate upon surrender.

For information telephone Tax Office EM. 6-8411, Local 416

W. M. CAMPBELL, Commissioner of Finance.

ANNOUNCEMENT

PERINI APPOINTMENTS

EUGENE F. NOEL

DELANO C. CANNON

Louis R. Perini has announced the appointments of Eugene F. Noel as President, Perini Quebec Inc., and Delano C. Cannon as Vice Chairman of the company's Board of Directors.

Mr. Noel has been Vice President and General Manager, Cobra Industries Inc., Vice President, Quebec Newspapers Limited, Quebec City, and a Director of Federal Intercoastal Line, Montreal. He attended Ottawa University and Queen's University from which he graduated in 1936. As President of Perini Quebec Inc., he succeeds Mr. Perini who becomes Board Chairman.

Mr. Cannon has been associated with the heavy construction industry in the United States and Canada for 28 years and a Montreal resident since 1954. He graduated from the Massachusetts Institute of Technology in 1932. He is Vice President, Perini Limited, Toronto, and a Director of Perini International, Perini Westward Developers Inc. West Palm Beach, Florida and the Milwaukee Braves.

Head of the Perini organization in the United States since 1924, Mr. Louis Perini had been President of Perini Quebec Inc. since its incorporation in 1954. He is Board Chairman of the Milwaukee Braves Baseball Club, a Director of the Quebec City Aces Hockey Club and the Canadian Cancer Society.

DO YOU OWN These Stocks?

Industrial Acceptance	Canadian Collieries	Du Pont
Traders Finance	Goodyear Tire	Cassiar
Canadian Chemical	Canadian Breweries	Quemont
Sherritt-Gordon	Pembina Pipe	Bowaters
Hudson's Bay Co.	Russell Industries	Opemiska
Kerr-Addison	Dome Pete	C-I-L
Canadian Tire	Simpsons Ltd.	Molson's

To know what action to take now to best protect your capital and to assure your income, you need the essential up-to-date facts about each of your investments. Business conditions are continually changing and competition is becoming more severe. The companies that are in a position to benefit from these changes offer opportunities for investment profit. **How do your investments rate?** Canadian Business Service has prepared concise reports highlighting the pertinent features of the above companies and commenting upon their investment merit at this time.

For your copy of this valuable report send $2.00 and receive without extra charge the next four issues of the weekly Canadian Business Service Bulletin.

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IGA's 1959 Sales $250 Million, Up 15%

By HENK HOPPENER

Sales of the **Independent Grocers' Alliance** group of food retailers and wholesalers in 1959 increased at least 15%, to an estimated $250 million, Canadian IGA president John F. Damore informs **FP**.

In Canada 682 stores are affiliated with the group on a nation-wide basis.

IGA stores in Canada are mostly held on a lease basis, with IGA providing for stock and equipment totaling at least $100,000 per new store.

In the past year the group has concentrated on expansion into larger, new stores with a minimum floor space of 10,000 sq. ft. On the whole, the group has met competition successfully, according to Damore.

Sales of **Horne & Pitfield**, controlled by **Edmonton Associated Wholesale**, an IGA affiliate in Alberta and northern B. C., should top the $40-million mark for the year ending March 31, 1960—at least 14% better than last year's $32 million.

Profits for 1958-59 were $211,305 after taxes. They are expected to exceed that figure by some 10% in fiscal 1959.

New supermarkets were opened in Calgary and Edmonton. Total number is now 41. Before the end of the current fiscal year, seven more markets are to be opened.

The wholesale division serves some 500 unaffiliated grocers and operates from warehouses and "cash and carry" distribution depots.

M. Loeb Ltd., Ottawa, the IGA affiliate operating in northern and eastern Ontario and western Quebec, expects to reach a $65-million sales volume in 1960. Its 1959 volume, estimated at $51 million, compares with $36.9 million in the previous fiscal year.

Earnings are estimated at close to $750,000 before taxes for the year ended Dec. 31, 1959. This compares with $537,755 in 1958.

Loeb currently has 16 new stores under construction or about to be opened. Plans call for new stores to be added to the chain at the rate of one a month. Some $4 million will be spent on expansion.

Oshawa Wholesale Ltd., the IGA affiliate operating in central Ontario, profits in 1959 were "substantially better" than the previous year's net profit of $248,796, an official told **FP**.

Sales totaled $42 million in 1958 and are believed to have passed the $70-million mark in 1959, with new supermarkets and new wholesale clients added.

For the first 28 weeks, ended Aug. 8, 1959, net profit of $210,448 was up 75% from $120,349 in the corresponding 1958 period.

Shop & Save (1957) Ltd., Montreal, another IGA franchised operator in most of Quebec, is expected to end its current fiscal year March 26 with at least a 15% increase in sales and the same or better increase in profits.

It stepped up business with non-affiliated retailers, opened 18 new stores and expects to open another five in the course of this month.

Going by these indications, earnings per share for the IGA wholesalers may look like this:

	Estimated 1959 $ per share	Actual 1958 $ per share
Horne & Pitfield	0.34	0.31
M. Loeb	0.49	0.35
Oshawa Wholesale	...	0.41
Shop & Save	0.37*	0.40†

†On the basis of two-for-one split in Sept. 1959.
*On the basis of average number of shares outstanding (15% increase in shares in December, 1959 through stock offering).

Gas Export Opposition Collapses

The six-week-long gas export hearings before the National Energy Board in Ottawa wound up late last week.

In the final days opposition to export by several western interveners virtually collapsed.

This plus the earlier withdrawal of **Northern Ontario Natural Gas Co.'s** opposition improved chances for an early and favorable board recommendation on export.

There's been no indication, however, as to just how soon the board will be ready to make its report to cabinet or how soon the cabinet will be prepared to act on it.

A **Trans-Canada Pipe Lines** engineering witness placed mid-April as the deadline if the company is to firm up equipment purchases in time to complete the 50-mi. branch line to Emerson this year.

The most pressing problem is getting delivery in time of six gas turbine compressors costing around $3 million each.

Orders for three of these would be placed in the U. S., the remaining three with **Canadian Westinghouse** in Hamilton.

Four of the five export applications still require approval from the U. S. Federal Power Commission before the gas can be imported into the U. S.

But Washington has already completed the hearings phase of all four.

It is anticipated that the FPC decisions will be favorable and forthcoming in time to enable a full summer's construction program.

The Trans-Canada project to deliver up to 204 million cu. ft. of gas daily to **Midwestern Natural Gas Co.** has already been approved by FPC.

To take delivery of the Canadian gas, Midwestern must get FPC final approval of its financing plans and then construct some 500 mi. of pipeline from an Emerson, Man. delivery point to a point in Wisconsin.

Why They're Moving

Facts and comment on what's going on in the market and rumors behind some of the moves.

By P. T. DURRANT

Continued weakness in the market last week took 75 industrial stocks on the Toronto board to new lows for 1959/60, the largest number in any week this year. The decline extended to practically all groups; new lows were set by finance company, liquor and brewing, iron and steel, paper, food and merchandising stocks.

The Toronto Stock Exchange industrial index sagged to 496 early this week, its lowest point since Sept. 23, 1959. It has dropped 6.4% since beginning of this year. Present level compares with 532 a year ago and 1959's high of 555.

Although the Canadian stock market has moved down in sympathy with New York, the decline has not been so severe, **Collier, Norris & Quinlan,** Montreal investment firm, says in its monthly review. The review continues:

"Probably the reason . . . is that Canadian stocks appear relatively cheaper. Based on Jan. 26 prices, U. S. stocks were selling at 18.3 times 1959 earnings, compared with 16.7 times estimated earnings for Canadian industrials. The Toronto index was lower in relation to the Dow Jones industrial index than at any time since 1949.

"Although Canadian securities appear more reasonably based in relation to earnings than those of the U. S., the Canadian economy is growing more rapidly. This trend can be illustrated by the following statistical comparison of some significant economic indicators of the two countries over the last three years."

	1957	1958	% Change	1959	% Change	1957-59 % Change
G.N.P.*—U.S.	442.6	441.7	—0.2	480e	+8.67	+8.45
—Canada	31.8	32.5	+2.2	34.8e	+7.08	+9.43
Indust. Production—U.S.	100	99	—1	105	+6.07	+5.0
Index—Canada	155.4	152.6	—1.8	165	+8.13	+6.18
Corporate Profits*—U.S.	43.3	37.1	—14.3	47.2e	+27.22	+9
Pre-Tax—Canada	3.005	2.904	—3.36	3.398e	+17.01	+13.1
Personal Income*—U.S.	307.9	316.5	+2.79	332.6	+5.08	+8.02
—Canada	21.017	22.600	+7.07	23.934e	+5.88	+13.38
Farm Income*—U.S.	34.4	38.3	+11.3	37e	—3.40	+7.56
(Cash)—Canada	2.575	2.786	+8.2	2.776	—0.36	+7.81
Cost of Living—U.S.	120.2	123.5	+2.74	124.5	+0.81	+3.57
Index—Canada	121.9	125.1	+2.63	126.4	+1.03	+3.69

*Billion $ e—estimated.

Three finance companies—**Industrial Acceptance Corp., Interprovincial Building Credits** and **Traders Finance**—are among the stocks that have set new lows in recent trading. Operations of this group in the past year have been directly affected by the high cost of money. This is reflected in the interest rates paid on short-term notes by acceptance firms; last October rates weht as high as 6¾% on 180-365 day maturities. Since then, the rate has dropped to 5¾% on 180-365 day notes.

Short term money is easier to come by now than it was a few months ago, finance company officials told **FP**, and as a result their borrowing costs have eased. But, one said, it looks as though interest rates will rise again in the next few weeks.

Industry spokesmen are cautiously optimistic about the outlook for 1960. "For business generally, it should be a pretty fair year, although not as good as some executives have suggested," one official commented. A pickup in auto sales, which so far this year have been slightly lower than anticipated, would brighten the prospects of companies in the automobile financing field.

Volume of business at Traders Finance is on a par with last year, **FP** is told. Traders' results for 1959 are not yet available; for the first six months, net of $1.93 per share was 10% higher than a year earlier. **Union Acceptance Corp.** did more new business in the first nine months last year than in corresponding 1958 period, but higher cost of money trimmed earnings 13% to $276,982. Industrial Acceptance, which expects 1959 earnings to be about the same as 1958's $3.59 per share, looks for greater volume of business this year (**FP**, Jan. 23).

Results for 1959 of Interprovincial Building Credits (financing home improvements on a time-payment basis) will reflect provisions made for certain special and non-recurring losses. In 1958 fiscal year, company had a net profit of $1.22 per share. To conserve working capital, company is paying no further dividends in this fiscal year (ends Feb. 29). Disbursements total 47½c per share in current year vs. 70c in 1958/59. Dividend policy will be reviewed in coming year, president E. M. Henry says.

Here's how these stocks have traded:

	Recent price $	Week ago $	Month ago $	1959/60 range High $	Low $
Indust Accept.	31½	33¼	35⅞	41¾	31½
Int'prov. Bldg. Cr.	8⅞	8⅞	9⅜	12½	8½
Traders Fin. A	32⅛	34¾	36½	44⅛	32⅛
Union Accept.	9⅛	9½	9⅛	12½	8⅞

Only trade in **Robinson Cotton Mills** stock this year at $4 (100 shares were sold) was up from previous price of $3. In 1959 stock traded between a high of $3.25, a low of $2. Sale of the shares followed announcement in company's annual report that it has withdrawn from the textile business and will concentrate on manufacture of plastic foams. In future, profits from plastic production will not be drained by the textile losses company has experienced in recent years, chairman W. W. Robinson said.

In addition, company will have a yearly income from rental of premises in Toronto and Woodbridge, Ont. Net loss in 1959 was $61,703 vs. $69,029 year before.

Preferred stock of **Hendershot Paper Products** jumped $5 to $95 early this week. It has traded in the $97-$75 range this year. Last sale on the common was at $9¼ on Feb. 2. As rumored earlier (**FP**, Jan. 9), the offer to buy Hendershot common shares at $9 per share was made by **Canadian International Paper Co.** which has now acquired at least 85% of outstanding shares. CIP's offer is being held open until Feb. 29, unless terminated earlier.

Common stock of **Mindustrial Corp.**, Toronto holding company which formerly controlled Hendershot, was quoted on the unlisted market this week at $1.45 bid, $1.60 asked. Price rose from $1 to $1.60 when the offer was made in December. Mindustrial warrants to buy shares at $1.50 per share by July 1, 1960, are quoted at 8c bid, 12c asked (5c-15c in December).

Only New York Leads Toronto In Bank Clearings, Stocks

Bank clearings and stock exchange trading in 1959 indicate Toronto's growth as a financial centre.

In bank clearings, Toronto leads all Canadian cities, and is second only to New York on the North American continent, a Toronto Stock Exchange report shows.

Toronto's bank clearings have increased 48.7% since 1956, Montreal's by 36.1%.

The New York increase since 1956 was only 11.6%.

In share trading, the Toronto Stock Exchange 1959 volume of 763 million shares with $1,860 million represented 80% of the shares traded and 66% of the value of all trading done on Canadian stock exchanges.

The two Montreal exchanges accounted for 15% and 32%, respectively, with the other three exchanges at Vancouver, Calgary and Winnipeg accounting for the balance.

Here are some bank clearing totals for some major U. S. and Canadian cities:

($ millions)	
New York	668,461
Toronto	71,314
Chicago	65,429
Philadelphia	57,204
Montreal	50,034
Boston	39,484
San Francisco	38,414
Detroit	37,148
Pittsburgh	24,004
Ottawa	12,060
Winnipeg	9,782
Vancouver	9,771
Calgary	6,367
Quebec	2,971
Edmonton	2,344

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This new Agency has absorbed

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The experienced personnel of both agencies will continue without interruption to give top service to both old and new clients.

MACASSA OUTPUT

In December, **Macassa Mines** turned out gold bullion worth $211,831. A total of 13,009 tons of ore were milled for an average recovery of $16.28 per ton.

ANNOUNCEMENT

JOINS ROYAL TRUST ADVISORY BOARD

A. SEARLE LEACH

whose appointment to the Winnipeg Branch Advisory Board of The Royal Trust Company is announced. A prominent Winnipeg business man, Mr. Leach is President of Searle Grain Company Limited, and his directorships include Great West Life Assurance Company and Greater Winnipeg Gas Company.

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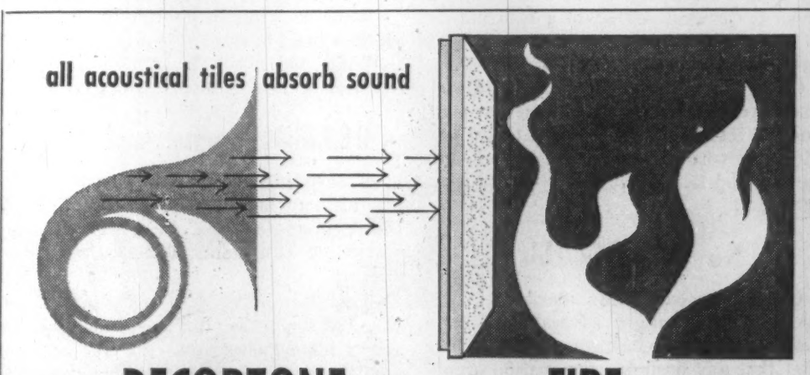

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Subjected to thorough testing at the Underwriters Laboratories Inc., Decortone acoustical tile was given a *one hour* fire rating. This adds a new dimension to acoustical tile—sound control plus greater safety in event of fire. Decortone is incombustible — absolutely no smoke or noxious gas develops.

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WRITE OR PHONE FOR TECHNICAL INFORMATION

Keeping Out the Quackery

Canada's lusty, but young, advertising industry is troubled with growing pains. How it copes with these will be an interesting test of its maturity and ability to discipline itself.

The problem: What to do about dishonest advertising claims?

These, probably, are to be found in only a fraction of one percent of all advertisements. But they are a thorn in the flesh of ethical advertisers, publishers, radio and TV owners. And the public which is sick and tired and well aware of false claims flowing up from the south will eventually demand a cure.

One suggestion well worth industry consideration comes from J. J. McGill, president of the Association of Canadian Advertisers and advertising manager of Imperial Tobacco Co. He proposes setting up an industry board, chaired perhaps by a member of the judiciary. It would hear the complaints now aired privately by competitors who, says Mr. McGill, are the first to recognize false or misleading claims.

If, in the board's opinion, the claims were not justified, it would (1) "request" withdrawal of the offending advertisement and (2) advise all media that the advertisement did not measure up to the standards laid down by the board.

This leaves a number of uncomfortably large loopholes. What, for example, if a group of competitors tacitly refrained from attacking each other's claims? Would the board hear public complaints as well as industry complaints?

And who would monitor retail advertisements? This is an area where advertising agencies are little used—but the very area where the greatest number of misleading claims are made.

But the suggestion should be mulled over by the advertising industry. Some sort of self-policing is certainly preferable to what's happening in the U. S.—policing by government agency.

The Canadian record is mighty clean. Any action to keep it that way deserves support.

Piracy Pays?

In the West where a man is a man and a spade is a spade, no one cavils, apparently, at an out-and-out raid on a competitor's staff.

Note a recent City of Saskatoon advertisement that offers "small cogs" a chance to become "big wheels". Financial aid for industrial development is offered to the type of man who "already knows the opportunities for a prairie-based factory or service organization competitive with the organization with which he is now associated".

This polite piracy—or something—apparently pays. Since 1949, industrial production in this agricultural province has zoomed up fourfold, or more than twice as fast as the cross-Canada total.

It's true that Saskatchewan started the last decade with such a small industrial base that each new venture represented a big addition to industry—but it's still a proud record of development.

The east, with its vestiges of effete corporate manners, had better look to its laurels, its small cogs—and its company secrets.

This Modern Age

In its unrelenting and unsmiling quest of information to document this changing Canada's progress into the technological future, FP is, now and again, stopped dead in its tracks.

Item. "Tranquilizer guns will soon be appearing on the Canadian market."

This conjures up visions of (1) peppered bank clerks standing by lethargically while tranquilizer-armed robbers scoop up the boodle, (2) supporters of a city administration picking off irate voters as they enter polling booths; (3 and worst of all) homeward-bound husbands, burning to blow off an accumulation of temper, sniped into complacency as they come up the front walk.

But the guns, apparently, are going to be aimed at man's meaty friend, the noble cattlebeast. Despite the advent of music to milk by and the arrival of foam rubber mattresses for cows (covered in a firm plastic and easily hosed down), the herds still tend to get a wee bit anxious and edgy, it seems.

Oh for the good old days when, if Bessie kicked over the bucket or switched a malicious tail into your face, you could swat her a fine one with a flourish of temper—and both you and Bessie felt the better for it all day long.

No Monopoly This

One of the odd things about socialists, who are by definition advocates of total monopoly under bureaucratic control, is their belief that any business combination organized by private persons is necessarily against the public interest.

In Toronto the other day Hazen Argue, leader of the CCF in the House of Commons, complained about the expansion of newspaper chains in Canada.

Of 92 dailies published in the country, he noted, 37 now belong to three chains. This "concentration of power", he suggested, was dangerous. The implication of his remarks was that a publisher owning several papers will impose a uniform editorial policy and deprive the public of the benefit of free discussion.

To the doctrinaire Marxist this accusation will sound convincing; but as a practical matter-of-fact in Canada it is nonsense.

The newspapers published in this country by Roy Thomson (who has publicly announced that his recently acquired British dailies will be Tory or Labor as the local editor thinks best) take no discernible political line. They are neutral.

The Bell-Sifton chain includes the Ottawa Journal, Conservative, and the Calgary Albertan, Liberal, equally militant for the opinions and causes their editors espouse.

The Southam chain has been long noted for the freedom of opinion it allows to editors in different parts of the country. It includes Conservative papers but it also includes the Ottawa Citizen, at one time an advocate of the Douglas theory of Social Credit, now probably classifiable as "Liberal" but certainly at no time right-wing.

It's a pity that politicians like Mr. Argue can't take a realistic view and recognize that publishers, like other businessmen, are in business to serve the public, can and often do improve this service by expanding their operations, but have no sinister designs and are just as public-spirited as anybody else and just as well aware that liberty of discussion is necessary in a free country.

But people who grasp this fact are not, as a rule, members of the CCF.

Annual Nonsense

Permanent drivers' license numbers are again being advocated by the Ontario Government. But much more to the point would be permanent license plates for all automotive vehicles, and for precisely the same reasons as those now advanced by Ontario officials for permanent drivers' licenses.

Permanent plates built in or welded to the car when manufactured or first sold would be far cheaper and much more convenient for all concerned. They would enable the authorities to keep a closer check on motoring offences. They would make car stealing and shuffling far more difficult, save a lot of red tape and end once and for all time those ridiculous last minute line-ups for plates each season.

Washington's Weird Ways

The United States has barred East German sports writers from entering the country to cover the winter Olympics, now being held at Squaw Valley, California.

The excuse: The State Department is afraid these "sports writers" will inject a political note into their coverage, using international sport for propaganda purposes.

Certainly the East German writers would play up the victories of their athletes, play down the defeats.

We'll be doing it in Canada. Will our sports writers be allowed to cross the border?

Weird indeed are Washington's ways in the field of international understanding.

Of Lords, Sprites and Bears

Fascinating additions to Canadian folklore are supplied in a new book called *The Chief*, a biography of Lord Hewart, chief justice of England, 1922-40, by Robert Jackson.

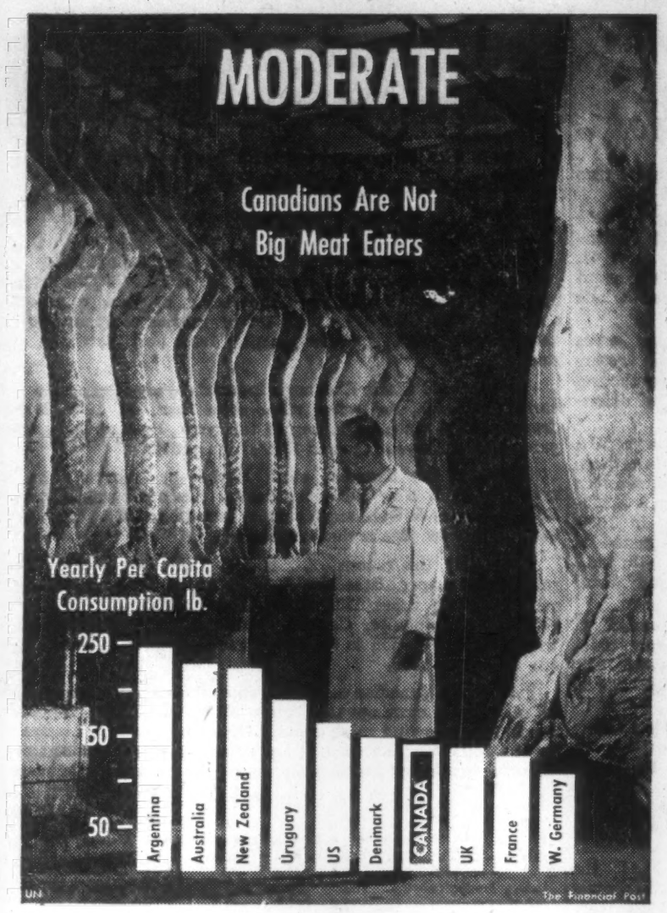
Lord Hewart visited Canada in 1927 and Mr. Jackson relates that he was pleased to renew his acquaintance with "the aged but spritely Sir William Mulock, chief justice of Ottawa."

The British jurist, it seems, was "enthralled by the beauty of the country and its wild life on the way to Toronto—the mountain sheep, the deer, the coyotes and the bears he found ready to pose for photographs on the roadside".

Many old-timers will have lively memories of Sir Wm. Mulock and his remarkable capacity, at the age of 95 or more, to absorb a bottle of whisky a day and sprint up long flights of stairs, complete with tailcoat and silk hat, as though he was not a day more than 80.

But Mr. Jackson is the first to record that his bailiwick was "Ottawa" and that he was a sprite. Spry, yes; but friends of the late Sir William will have difficulty in associating him with sprites, elves, leprechauns or other supernatural creatures. He was, to the naked eye, quite definitely terrestrial.

As for Lord Hewart's zoological observations, the most plausible theory is that he arrived in Toronto by way of Bay Street. But even on Bay Street, the best historiographers say, mountain sheep were becoming obsolescent in the 1920s though bears were perhaps observable from time to time. Lord Hewart, it's clear, must have had what's called extrasensory perception.



Post Scripts

MR. CLARK

Oil Man

New president of the Calgary & Edmonton Corporation Ltd. is Alexander Clark, 57.

Clark has combined a distinguished academic record with on-the-field experience in his 34 years in the oil industry. Since his visit to Alberta in 1939, he has been a keen observer and later an active participant in the development of the province's oil and gas industry.

He was born in Great Falls, Montana, helped build up his father's ranch that accommodated up to 1,200 head of cattle. After obtaining his primary education in Great Falls, he attended high school in San Diego, California. On graduation there, he enrolled at Whittier College, near Los Angeles and in 1926 he obtained his first of three degrees.

That same year he married the former Hazel L. Swain.

It was during his undergraduate days that he became interested in the oil industry, working as a roustabout, roughneck and on other jobs, principally in the Sante Fe Springs oilfield. He also became acquainted with George F. Getty, founder and grandfather of present head of Tidewater Oil Corporation.

Following his graduation from Whittier College, Clark worked in the oilfields for General Petroleum Corporation but decided he needed more education. Three months later he enrolled at the California Institute of Technology, at Pasadena, and in two years earned a Bachelor of Science degree in geology. Then after a stint with Union Oil Co. he obtained a Master's degree in geology.

He joined Shell Oil Company as paleonthologist and stratigrapher.

After working on special assignment for a time, he was sent to Calgary as the company's exploration manager in 1941. He returned to California in 1943 and three years later became exploration manager for the Rocky Mountain area. He held that position until 1952 when he returned to Calgary to join Federated Petroleums as vice-president and director.

His hobbies are fishing, big game hunting, horseback riding and reading.

• • •

Packers' President

A Westerner, who has followed the trail of cattle and the livestock industry through its many phases, has been elected president of the Meat Packers Council of Canada. He is James Orville Simpson, 49, Barrie, Ont., general manager of the First Co-operative Packers of Ontario Ltd.

As president he will head the 26-man executive of the Council which represents Canada's largest food industry — meat packing. The Council serves as a link between the country's livestock producers and meat processors. It comprises 20 meat packing firms operating 41 plants including three co-operatives in eight Canadian provinces.

Jim Simpson grew up on a farm near Moosomin, Sask. and received his primary and secondary education there. He came east in 1934. He joined the First Co-operative Packers the following year as a salesman. In the last war he served four years in the RCAF then returned to the Co-operative. In 1952 he was advanced to assistant general manager and the following year became general manager.

Married, with one son, Simpson believes firmly in the value and satisfaction of cultivating interests outside his business office. He is a member of his church board, the Rameses Shrine, the Toronto Board of Trade, the Barrie Chamber of Commerce, director, Orillia Branch of the Canadian Industrial Management Association and a past president of the Barrie unit of the Canadian Cancer Society. For relaxation, curling in the winter is a substitute for the hockey of his youth, and he plays golf in the open months.

• • •

Mutual's New Chief

A warning to Canadians not to try to grow too fast was voiced this month by Edward Anthes Rieder in his first address as president to policyholders of Mutual Life Assurance Company of Canada. The price to be paid for such an attempt is either excessive reliance on foreign capital, which poses basic questions about our ability to maintain economic independence, or the treadmill of inflation, he said.

The new president, a career insurance man, joined the head office staff of Mutual Life in 1931, following his graduation from the University of Toronto in commerce. He served in the actuarial, group and reassurance departments before his appointment as an assistant actuary in 1938.

In 1956, two years after reaching the top of Mutual's actuarial department, Rieder was named assistant general manager, and in 1958, vice-president and general manager. Early in 1959, he was elected to company's board of directors and made executive vice-president. Shortly afterwards, he was chosen to fill the vacancy created by the death of President Harry L. Guy.

Rieder is a Fellow of the Society of Actuaries, and a past president of the Canadian Association of Actuaries. He has also served on a number of committees of the Canadian Life Insurance Officers Association. In 1959, he was elected a director of Waterloo Trust and Savings Co.

A native of Kitchener, where he was born in 1908, Rieder received his early education in local public schools and Kitchener-Waterloo Collegiate. He was married in 1936 to Jean Rudell. The Rieders have three daughters and a son, Tom, who is a third year mechanical engineering student at the U. of T.

Rieder has played an active role in the community life of his home city. He is a past president of the Kitchener-Waterloo Gyro Club, and was a member of the K-W Hospital Commission until the pressure of new responsibilities recently forced him to resign. He continues to sit on the administrative council of Zion Evangelical U.B. Church in Kitchener.

In his spare time, Rieder enjoys golf and curling in season, and relaxing with his family at their summer home on Lake Huron.

MR. RIEDER

C. Knowlton Nash Says . . .

THERE'S a chipper, bright-eyed 70-year-old in Washington, D.C., for whom I have a lot of hero-worship.

He's Stephen Young, an Ohio Democrat and a politician who just doesn't give a damn. If he doesn't like you, he says so, right out. If you criticize him, he calls you "insane".

If he's at a banquet listening to some hours-long, boring speaker, he has been known to get up, mutter something about "old windbag" and scram.

Now this is not the kind of thing a politician should do. It's certainly no way to get elected. But Sen. Young prefers to say exactly what he thinks at a particular moment rather than indulge in some graceful political hogwash.

Young has simply thrown out all his books on "How to be Successful in Politics". Emily Post surely whirls in her grave at the antics of this rough-hewn Democrat.

In a sense, he's somewhat akin to that Canadian parliamentary maverick Douglas Fisher, the CCFer from Port Arthur, but Young even "out-shocks" and "out-bristles" Fisher.

Fakers, Dopes

I like old man Young because he's such a refreshing breeze in this town of political fakers, bores and self-righteous dopes. You'll never catch Young writing his constituents with the gushing claptrap that is the Washington norm.

In answer to one constituent who wrote to disagree with the way Young voted on a bill, the Ohio Senator replied:

"Dear Sir: You are a liar. Very sincerely yours, Stephen M. Young, Senator."

To a union official who asked his support of a measure Young did not like, the Senator wrote simply:

"Dear Sir: No. Sincerely yours, Stephen M. Young."

This is not the kind of letter writing that endears Young to the hearts of the recipients. But he just doesn't care.

He was elected in 1958 and he says he's going to serve only one term. Frankly, I think that's a shame, because we need this kind of man around Washington to combat the constant flow of syrupy platitudes that pour out of this town.

Listen to this passage from a letter he recently wrote to a correspondent:

"Don't give me any more of your unsolicited advice. I know it costs nothing, but that's exactly what it's worth."

Or to a union official pleading with him to support a particular bill, he wrote:

"Dear Sir: Why would I do a thing like that? You are insane. Sincerely yours, Senator Stephen Young."

Another Dilly

You can frequently tell when Young is composing these bristling replies. From the Press Gallery in the Senate I sometimes see him scribbling away furiously at his desk. Then he'll call over a colleague, show him what has been written and both will break into guffaws and backslapping. Obviously Young has prepared another dilly.

Actually, I suppose his *pièce de resistance* was his recent letter to an Ohio branch of the American Legion, which passed a resolution criticizing his speech at what the Legion's Americanism Committee felt was a left wing meeting.

To this particular committee, even the Wolf Cubs are left wing. At any rate, here's what the good Senator from Ohio wrote back:

"I repudiate your resolution, buster, and your pompous, self-righteous, holier-than-thou title of Americanism Chairman.

"My observation is that many of you loud-mouthed, publicity-seeking professional veterans were chairborne in the Pentagon or elsewhere while millions of us were overseas in combat."

Any man who is a politician and can write a letter like that is a man after my own heart.

Yes sir, we could use more Stephen Young's in Washington, and maybe it wouldn't be a bad idea to have a few like him in Ottawa to twist the tails of some of our own sacred cows.

C. Knowlton Nash, who covers U. S. national affairs for FP, *is a newsman and commentator. An experienced Canadian journalist, he lives in Washington now and loves to write about U. S. manners and mores.*

What Others Are Saying

Circus Not Wanted

Ottawa Journal

A Commons Committee is to investigate tolls collections on the Victoria and Jacques Cartier bridges at Montreal. Certainly there is a place for committee enquiries and this newspaper has long held that Commons committees should be given more work rather than less.

But it seems true that the investigation into the tolls collections on these bridges is going to border upon a kind of political free-for-all. The committee is likely to hear more noise than information. The Journal would prefer to see the Government put the enquiry in judicial hands — if for no other reason than that things being as they are the public will not likely be satisfied with a report from the Railway Committee, no matter what it should report.

But if the Government is committed to this procedure we hope most anxiously that it will take special precautions to see that the committee is not made into a politicians' free-for-all.

• • •

NOT IMPRESSED with the argument that there are many expenditures over which the government has no control, is the **Peterborough Examiner** which tartly observes: "There is every reason to believe that if the Government had not wildly committed itself to all kinds of needless expenditures three years ago it would not be bursting its breeches to balance the budget this year."

• • •

OUR TREATMENT OF THE INDIANS in Canada does not leave us much to be smug about the way natives have been handled in other countries, declares the **Wingham (Ont.) Advance-Times.** "True, Canadian Indians were not massacred as was the case in some American countries, but we did go to the opposite extreme in overprotecting them to such a degree that they were never permitted to take their place in a changing civilization."

• • •

IN HOME BUYING at least Canadians cannot be accused of being over cautious, argues the **Red Deer (Alta.) Advocate.** "The average Canadian family buys something which is often beyond their means at the start. With true Canadian optimism that the best is yet to come, the home-buyer feels that his financial position will improve in years to come and what is at present an almost impossible burden of repayments will soon become lighter."

• • •

WE WISH THAT some food merchandising techniques were not so elaborate, complains the **Nanton (Alta.) News.** "We don't like coming on small rubber or plastic dinosaurs in our cereal, and we don't want the place mats in soap, and we don't care about dishes and glasses which never seem to match anything we have. However we detest even more the gimmicks which we have to work for. We hate saving coupons for months or years."

Stop Me If . . .

A male attendant in a mental hospital noticed a patient with his ear close to the wall, listening intently. The patient held up a finger for the attendant to be very quiet, then beckoned him over and said: "You listen here!" The attendant put his ear on the wall and listened for some time, then turned to the patient and said: "I can't hear anything." "No," said the patient, "and it's been like that all day!"

• • •

Father was standing at the edge of a cliff admiring the sea below, the sandwiches clutched in his hand. His son approached him and tugged at his coat.

"Mother says it isn't safe here," said the boy, "and you're either to come away or else give me the sandwiches."

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February 20, 1960

'Science' The Cure for What Ails Us

C. P. Snow says we are undervaluing 'the scientific revolution' . . .

By J. B. McGEACHY

EVERYONE MUST now be aware that in the Western lands, including Canada, we must produce more scientists and engineers or perish; but it's a newer idea, to me anyway, that we must all show greater respect for scientists as learned persons and for their mystery as a form of culture.

Not that I have the slightest desire to show disdain for scientific men and what they know; but I had thought that they were already held, by all and sundry, not merely in respect but in awe and were being accorded the incentives and status symbols necessary to cause them to rise and shine.

Not so, according to a small book just published by C P. Snow, called "The Two Cultures." Mr. Snow, if I read him aright, is infuriated by the top-lofty and scornful manner shown by many persons, especially "literary" persons, toward men of science. He feels that this superior attitude betrays a total, lamentable and disastrous ignorance of "the scientific revolution" and what it means to the world.

If the great and powerful western states don't wake up to this revolution and get in tune with 't, they're due for eclipse as sure as medieval Venice, Queen of the Adriatic. So argues Mr. Snow; and I must say that, though I don't agree with some of his contentions or fail to see the point of them, he has made a most powerful impression on my mind.

His book, which began as the 1959 Rede lecture in the University of Cambridge, evidently struck deep roots in other minds too. I have seen it favorably reviewed on both sides of the Atlantic.

It was quoted with approval last week by Dr. Murray Ross, who, as president of the still embryonic York University, has a unique chance to do something original in education and must be searching hard for the right way to do it. The Snow book is clearly going to be influential.

Its author's personal history is relevant. C. P. Snow (he figures as Sir Charles in Debrett but his title seldom appears elsewhere) is an Englishman who bega.. life as a student of science. He was lucky enough, as he says, to be at Cambridge during a time when a few great physicists (Rutherford, Cockcroft and others) were doing the original work on nuclear fission that led to the atom bomb.

Snow himself took part and became a full-fledged scientist of the justly famous Cambridge school, which is certainly as proud a scientific badge as a man can wear in the English-speaking world, or maybe the world as a whole.

Very soon, however, he decided that his true bent was literature; so he took to writing fiction. He has scored a brilliant success as a novelist (for this he was knighted) and is now a full-time professional writer. His novels, as one might expect, are notable for the adult, intellectual (often scientific) quality of his characters.

Thus Snow is a man with a foot in each camp; and it would be hard to find anyone better equipped to tackle the subject of the book I'm discussing. "The Two Cultures," of course, are the scientific and the humanist.

J. B. McGEACHY

"The two great revolutions happened when man ceased to be a nomad and took up agriculture and when he discovered machines. The scientific revolution, just started, will be comparable in its effects; but only the Russians have so far grasped the idea and size of it."

Snow begins with an argument that the two are becoming isolated from one another and ceasing to communicate. **He moves freely in and between the two worlds, having both scientific and artistic friends, and he finds that they know nothing about one another, have nothing to say to one another and even regard one another with a certain sniffish hauteur.**

It shatters Snow to discover the ignorance of one set of highbrows about matters that are common knowledge to the other.

In circles of people highly educated on traditional or classical lines, it seems that Snow is in habit of asking: Can anyone here explain the second law of thermodynamics? No one ever knows the answer (though, says Snow, the question is about the scientific equivalent of: Have you read a play of Shakespeare?) and the worst of it is that nobody seems particularly ashamed of not knowing.

On the other side of the fence, Snow has had the chance to ask many scientific men about their leisure-time pursuits and interests; and it seems that when he inquires if they ever read any books (meaning non-scientific works) the replies are usually dim and negative. "Well," said one, "I've tried a bit of Dickens," as if this was a mental effort that excused him from any further excursions into literature.

Well, I find Snow's complaint and his evidence on this point very interesting but I rather sympathize with the victims of his questions and I don't quite follow his argument here. Will we all be expected to know everything in his new commonwealth of learning, or at least a little of everything?

At any of Dr. Snow's literary parties, I for one, being innocent of physics, would have been stumped by that question about the second law of thermodynamics. If I knew it 40 years ago, I have totally forgotten it; and now that I have dug it out of the encyclopaedia, I do not understand it;

"If a quantity of heat Q is applied to any substance at a constant temperature t, the work dW obtainable from Q by an ideal reversible engine working in a cycle of range dt must be proportional to Qdt multiplied by some fraction of the temperature, F/t, which must be the same for all substances."

Fascinating information no doubt but of what value to a politician making a speech, a banker making a loan, a painter producing a picture or me writing this column? Smidgeons of apparently useless classical learning could help any of these four characters, by affording some insight into human nature. But the thermal law tells me nothing whatever about human nature; it does not even provide guidance in operating the furnace. It is knowledge of strictly technical application.

Thus, while I'm certainly not proud of my ignorance of the scientific law that ought to be, in Snow's estimation anyway, part of every educated person's mental furniture, I'm not really ashamed of it either, and so I don't know what's he driving at here.

As for the scientist who reads nothing but Dickens for recreation, and only bits of the novels at that, I'm not worried for his mental health either. If he had spare-time enough to become a learned humanist, this might just possibly sweeten his relationship with his colleagues, especially if he has administrative jobs. But I don't see how Dickens, Shakespeare, Plato or anybody else on the "literary" side will help him in the slightest to discover the new antibiotic, fissile method or possibly thermodynamic law he may be looking for.

To wind up this part of the argument, which may sound intolerably highbrow but is in fact quite practical, I am a bit skeptical when I hear that universities should henceforth produce only "whole" men, meaning people who are humanists and scientists at the same time.

The distinction between the two kinds of knowledge is quite valid and easy to define; and there's quite enough of either kind, indeed quite enough of each small segment of either kind, to occupy the whole of a man's life and mind. Very few of us are Leonardos or Einsteins. Certainly a liberal education should include some science. But without specialization we shall have no truly learned men at all, or hardly any.

But the main part of Snow's argument, to me quite impressive, concerns not the relative merits of specialist and general courses. It concerns the status of science, as a discipline and a culture.

At the start of this piece I suggested that men of science are now generally regarded not merely with respect but with veneration; and I think that's true of the famous, originating men in physics, medicine, chemistry and other sciences.

But I suppose it's also true, as Snow alleges, that the makers of popular culture, being mostly people of traditional education themselves, tend to leave science and scientists out of their picture of civilization and "the good life."

In my school days in Scotland, reaching a point where the scholastic road forked in three directions, I took the "classical" side, which meant devoting most of the hours to Latin and Greek.

It sounds ridiculous in the telling but we Grecians and Latinists viewed the boys taking the "modern course" as distinctly inferior beings. Chemistry, one of their subjects, was known to us as "stinks;" and it seemed incredible to us that any properly nurtured youths, unless they had fallen on their heads in infancy, should engage in such barbarous, ungentlemanly pursuits.

I don't know if this ridiculous snobbism persists anywhere to this day; but I gather from Snow that it must. He complains that the "literary" people have arrogated the title of "intellectual" entirely to themselves. They've also copped the word "culture." Poetry is culture; but physics is definitely not.

Snow is sad about the scientists' indifference toward humanistic studies; but he is positively indignant about the humanists' disdain for science. The self-styled "intellectuals" are natural Luddites vis a vis scientific progress, he says. They want none of it.

And what is the result? The result is a general public unawareness, arising from unawareness at the top literary level, of "the scientific revolution," a key expression in Snow's whole case. He may not have coined it; but he gives it more meaning than I have seen attached to it by anybody else.

In the past there have been only two great revolutions in human history. (By comparison, the fall of the Roman Empire and the triumph of the Russian Communists were mere trivialities.) The two really tremendous changes happened, first, when man ceased to be a nomad and took up settled agriculture; and, second, when he discovered the use of machines about 200 years ago.

The scientific revolution now upon us, says Snow, began only about 20 years ago but will be fully comparable with the agrarian and the mechanical revolutions in its stupendous, everlasting effect on human life. It offers, says Snow, the only answer to all the global problems: East versus West, marginal poverty in rich lands, mass poverty in backward lands, the explosive rate of population growth.

Nothing will settle these questions but the rapid world-wide expansion of industry through full use of new scientific information. **Therefore we need, the world needs, an enormously accelerated supply of scientists and engineers; and this is to be obtained, if I understand Snow, by greatly increased spending on scientific education, plus greater demand, honor, prestige, pay, opportunity and everything else for the man of scientific training — the heir of all the ages.**

The Russians, Snow says, are the only nation who have yet grasped the idea and size of the scientific revolution. But their communist form of society, if Snow is correct, is in a way irrelevant to their technological success. It only enables them, through propaganda, mobilization of resources and labor, total control of education and so on, to do more quickly what any people can now do, and must do for survival. It is about time we woke up and got going.

I think this a fair statement of Snow's main conclusion; and I'm delighted to note that it doesn't mean that fewer and fewer people will be getting less and less humanist education.

It only means that more people, far, far more, must be educated in a scientific discipline or technique. Not one boy or girl with the kind of brain to make a scientist, first, second or even third grade, must be allowed to slip or drift into a less useful occupation. Every one of them must be identified and then cajoled, subsidized and otherwise urged with both stick and carrot to the goal.

This appears to be the program; and it looks constructive. It's all right with me so long as I myself don't have to know the second law of thermodynamics.

The Two Cultures and The Scientific Revolution, by C. P. Snow, Macmillan of Canada, 58 pp.; $1.75.

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Push Training In Refrigeration, Air Conditioning

Federal-provincial training programs this year will emphasize the refrigeration and air conditioning industry.

An effort will be made to upgrade quality and increase quantity of technical staff available to this growing industry, C. R. Ford, federal vocational training head, told annual meeting of Canadian Refrigeration & Air Conditioning Association.

Improvement of technical quality of work is a major objective of the association.

J. B. Graydon of Toronto was elected president of CRACA for 1960. Other officers: C. M. Fleming of Winnipeg, first vice-president; W. J. A. Marshall of Toronto, second vice-president; and J. B. Parker of Toronto, treasurer.

LEGISLATURE LOOK-AHEAD

Co-op Housing, Audit On the Floor in P.E.I.

From Our Own Correspondent

CHARLOTTETOWN — The Prince Edward Island Legislature opens March 1 under the new Conservative administration of Premier Walter R Shaw.

The government is expected to:

- **Institute legislation** supporting co-operative housing which would enable buyers to acquire a home with the province augmenting federal assistance.

P. E. I. would back 25% of a loan on a $12,000 to $15,000 house.

- **Broaden the farm settlement** policy of changing the statutory age limit from 35 to 50 years and permitting a 19-year-old son to qualify for aid on a father-and-son basis.

- **Inaugurate minimum pay supplements** to teachers, depending upon qualifications.

Speculation is that the enabling measure will be adopted while the educational survey, originated by the former Liberal government, is being completed.

- **Table the findings of McDonald, Currie & Co.**, which has completed an audit of the province's financial position (**FP**, Oct. 17).

Strongly indicated is creation of a 10th cabinet post and the establishment of a tourism and municipal affairs department.

It is reported that Andrew B. MacRae will assume the agricultural portfolio, now held by Shaw, leaving the premier free to devote all his time to administration of the government.

Prior to the Island election last summer, the Conservatives pledged to change the provincial election act "and bring in an electoral system patterned on federal regulations."

A committee may be appointed to recommend reform which would eliminate multiple voting based on property ownership.

Sources close to the government told **FP** the administration will do all it can to expand existing markets for P. E. I. products and penetrate into new homes.

One suggestion:

A larger and faster ship might be sought to serve fast developing northern markets.

The tourist industry will get a close look.

It is reported Provincial Secretary J. David Stewart will seek a $2 million revolving fund for the Tourist Accommodation Loan Board to provide assistance to tourist operators.

At least $2 million will be spent on the roads to resources program.

In all between 100 and 150 mi. of roads will be paved in the province this year.

Important fisheries already have received a boost.

Keels of three draggers have been laid and three more are expected to be started soon. A longliner also is planned.

Conservatives have a 22 to eight majority in the 30-seat House. Election of one Liberal is being contested.

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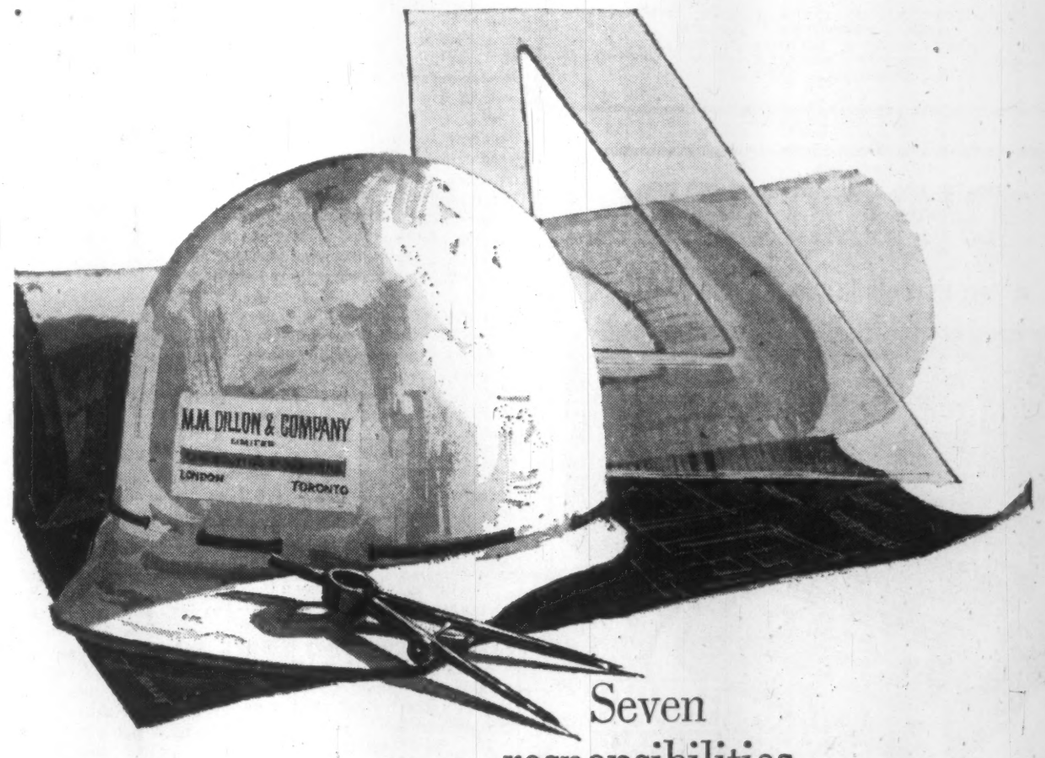

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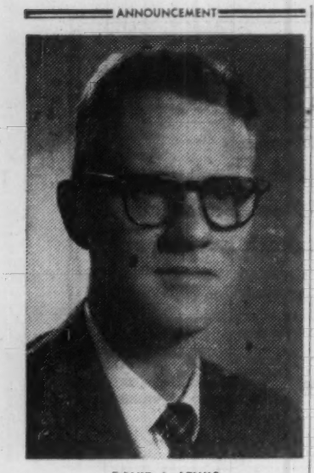

DAVID A. LEWIS

David A. Lewis has been appointed to the Head Office Executive Department of The Canadian Surety Company, Toronto, according to a recent announcement made by Malcolm B. Strong, Vice-President and General Manager of the Company. Following his graduation from the University of British Columbia, Mr. Lewis joined the American Surety Company of New York at their Head Office in New York. He served in the Scranton, Pennsylvania and Milwaukee, Wisconsin Branch Offices prior to his assignment to Portland, Oregon, where he became Branch Manager in 1950.

More Money Woe Coming For Canadian Colleges?

(CONTINUED FROM P. 1)

versity Foundation Inc. in New York, which aids Dalhousie University in Halifax; **Friends of McGill University Inc.**, of New York; **Friends of Queen's University Inc.** of New York; **Associates of the University of Toronto Inc.** of New York; **Friends of the University of New Brunswick Inc.** of Boston and **Friends of the University of B. C. Inc.**, of Bellevue, Wash.

These universities are understood to be concerned over the potential loss of income if the Internal Revenue Service makes its crackdown.

The plan to rule these donations as non-deductible has been considered off and on for years by Washington, but only in the last three or four months has it come in for particularly intensive scrutiny.

This has resulted in lengthy delay for some Canadian universities seeking to get into the tax exempt and donation deductible category.

McMaster University in Hamilton, for instance, has been waiting on its application to IRS for more than a year.

Officially, the U. S. tax sleuths remain coy on the matter, saying only that these applications are being considered on a case-by-case basis.

However, other sources have indicated to FP that the IRS is on the verge of taking some action on the issue.

This could be either in the form of a general ruling to be published or simply by denying each application as it is presented, if almost all the money to be collected is sent back to a foreign nation and is under the control of an organization in the foreign country.

The American Bar Association January taxation bulletin says flatly that Washington will issue a general rule.

It says: "It is now understood that the Service will rule that contributions to charitable organizations are non-deductible under Section 170 in certain circumstances where the funds are to be used abroad. The test the Service apparently will apply is whether in substance the domestic organization may be said to be soliciting funds for the use of foreign organizations."

One key in determining deductibility involves the word "control". It is possible IRS may rule that if the U. S. organization maintains control over money it sends to a foreign country, then donations to that organization are deductible.

This, however, would not likely apply to the corporations established by the Canadian universities since the U. S. corporations mainly act as "feeders" or agents for the Canadian schools.

Another possibility may be that the IRS could say only that portion of the donation which is spent in the U. S. can be deductible.

Insofar as the Canadian universities are concerned, this would be almost as bad as a complete throwing out of the deductibility.

It is pointed out, however, that even if IRS rules the donations are not deductible from income tax, the organizations themselves set up by the Canadian universities likely will remain tax-free.

There has been considerable pressure to have IRS make a change such as now is being contemplated from non-Jewish groups in the U. S. These groups have been unhappy over the deductions taken for donations to Jewish organizations established in U. S. to send money to Israel.

The U. S. tax regulations covering this point indicate that organizations in the exempt category, as the Canadian university organizations are, can have donations deductible for gift tax and estate tax purposes.

When it comes to income tax, however, it's a different proposition.

It depends on your interpretation of what the regulations say. Until now that interpretation has resulted in the donations to the "friends of" organizations set up in the U. S. being deductible.

But IRS might change this either by issuing a general ruling, or simply by applying a new interpretation to each case it considers and in a review of previously approved applications.

The tax regulations say a U. S. corporation cannot deduct donations to a trust, chest fund or foundation if the money is to be used outside the U. S. Because of this, the Canadian universities had their fund-raising organizations incorporated.

In its January taxation bulletin the American Bar Association notes that IRS, in considering the change, is aiming at "domestic organizations set up by a foreign organization to solicit funds as its agent or where the domestic organization solicits funds expressly for a foreign organization."

The ABA also notes: " . . if the domestic organization in fact uses its funds principally for the support of foreign organizations, it is understood that the Service might deem the contributions were made 'to or for the use of' the foreign organization rather than the domestic organization unless the domestic organization retains control over the use of its funds in the hands of the foreign organization.

"As authority for its position, the Service relies upon its interpretation of Reg. section 1.170-2 (a) (1) pertaining to limitation on charitable deductions by individuals which provides that a 'contribution to an organization described in Section 170 (c) is deductible even though some portion of the funds of the organization may be used in foreign countries for charitable educational purposes'."

"Some portion", according to now-emerging IRS thinking, does not mean 90% or more as is the case in most money-seeking organizations set up by foreign groups in the U. S. that send the money home.

"Some portion", IRS thinks, should mean a very small part of the total collected.

WESTERN FOOTBALL TELEVISION RIGHTS

Sealed tenders for the Television Rights of the Western Interprovincial Football Union for the 1960 season will be received at the office of the T.V. Chairman, W.I.F.U., Post Office Box 580, Edmonton, Alberta, on or before 5 p.m., March 7th, 1960.

Information regarding Rights may be obtained from the above address, or by telephoning GArden 27131, Edmonton, Alberta. Highest, or any bid, not necessarily accepted.

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The Outlook

(CONTINUED FROM P. 1)

treasury bill yield, for instance, advanced by 3% from 3.49% to 3.57% by mid-February.

Bank loans and interest rates are both likely to rise again over the next few months. Two reasons: The normal spring pickup in business activity will put added pressure on supplies of bank credit; business and government borrowing on the bond markets to finance new capital projects will probably push borrowing costs up further.

Whatever the spring burst of activity may bring, **current trends on the financial front suggest that the growth pace of business this year may be on the moderate side.**

* * *

BUT IF THE PACE of expansion throughout 1960 is likely to be measured, the year itself gives every sign of being prosperous. **One very optimistic forecast, made this week by Gairdner & Co., investment dealers, predicts that goods and services produced this year will chalk up a 9% gain in value** or about a 7% to 8% increase in true volume. Other forecasters look for a 5% to 7% real gain in gross national product.

Whatever the exact gain likely in GNP, **the impetus will depend, anyway, on what happens with these four factors:**

• **Capital spending.** An estimate of 1960 public and private outlays on new machinery, new plants, new roads, new schools will be released soon by Ottawa. **Expectation is that there will be at least a reasonable increase over 1959's total of about $8.5 billion.**

Gairdner & Co. forecast a 7% to 10% gain which would bring the level of this spending up to $9.3 billion, at most. Other predictions made recently are more cautious, speculating on a 4.5% to 5.5% advance which would place the 1960 total just under the $9 billion mark. But any increase, even a small one, should guarantee a year of steadily increasing prosperity.

• **Inventory building throughout the economy.** Trends in this area are important: Liquidation precipitated the last recession and re-accumulation sparked the current expansion. **Expectation is that inventory accumulation will continue at least over the first half of the year.** In most major industries, business inventories are relatively low. In manufacturing, for example, latest figures, which cover November, show that inventories were 1% lower than a month earlier and only 1.2% above a year before.

On this score, the First National City Bank of New York warned U. S. business: "Whether accumulation is crammed into the first part of 1960 or cautiously stretched out over a longer period can spell the difference between boom and bust or a sustainable expansion." The warning applies equally to Canada.

• **Exports.** Sales abroad ended 1959 on a strong note with metals, minerals and forest products contributing most to the over-all 5% export increase in 1959. **Iron and iron products showed the largest gain by marking up a one-third advance as against a one-sixth decrease in 1958.** Sharply higher iron ore exports—probably up 50%—were largely responsible, although rolling mill products also contributed heavily.

With the expectation of a good year in the U. S., further advances can be counted on. Most forecasters expect a 5% to 6% gain in 1960—but some analysts look for a 10% increase in foreign sales.

• **Consumer spending.** If exports, inventories and capital spending all rise as expected, employment will advance steadily as the year wears on and incomes will make sturdy gains. **Result could be good news for retailers: A 6% to 8% increase in consumer outlays.**

* * *

THESE LIKELY GAINS just about guarantee 1960 as a year of substantial, but not runaway, growth. And **current price trends suggest that 1960's growth may be relatively free of inflationary overtones.**

Consumer prices in 1959 were only 1.1% above those of a year earlier, on average. Likelihood is that this year's increase won't be much greater. Indeed, prices ended 1959 on a downtrend, due in most part to lower food prices which account for one third of the index.

One good reason for expecting a measure of stability in consumer prices: Despite some 20 months of economic expansion, wholesale prices in 1959 averaged only 1.2% higher than a year earlier and have been showing practically no change since last spring.

Bank of Nova Scotia has worked out the changes which have produced over-all stability at the wholesale level: animal products 19% below year-end 1958 levels; oils and fats —20%; steers —12%; iron and steel scrap —4%; asphalt shingles —29%; petroleum products —4%; paint +4%; soaps +4%; wool +40%; leather +13%; rubber +36%.

Lumber prices after rising in the first half of 1959, have eased by 1.4%. Copper prices have strengthened moderately; zinc prices were some 6% above year-earlier levels by this month.

Gas and Oil War For Home Heating

(CONTINUED FROM P. 1)

utility is now offering this service for $1.75 to $1.95 a month, over and above fuel charge.

Since its introduction into Montreal last spring, **Quebec Natural Gas Corp.** has added 13,207 new gas water heater services.

Consumers' Gas started the rental business rolling in Toronto a little over a year ago.

Quebec Natural Gas is also doing a big rental business in a type of combined cooking range and heating unit.

"We find that many customers going in for rentals are ultimately buying the equipment outright," QNG officials told **FP** this week.

The new rental services appeal to many house-builders. They reduce the capital outlay per house—a big consideration—and the saving can be passed on to the purchaser.

In the meantime, the battle between the two fuels on the second mortgage front has been producing more fireworks.

Imperial Oil touched off the whole mortgage battle last summer (**FP**, Sept. 19) with a second mortgage offer of up to $1,200 at 6% to Quebec and B. C. housebuilders who installed fuel oil equipment and undertook to use Imperial's product.

That was oil's first counter-blow in the battle. Since then, Imperial has extended this offer to Manitoba and Ontario.

At least one big Quebec fuel-oil dealer, representing another major oil company, is matching Imperial's offer.

Now the gas utilities are fighting back with second mortgage offers of their own.

Quebec Natural moved first; **B. C. Electric** followed suit on the west coast; next **Winnipeg & Central Gas** and more recently Union Gas Co. and United Fuels jumped into the mortgage battle.

Both sides are jockeying for a big share of the coming spring house-building market.

Their overtures to builders are increasing in intensity. Strapped by tight money, the builders have become very attentive listeners.

Jarvis to Plan Arts Conference

Alan Jarvis has been named national director of the conference committee of the Canadian Conference of the Arts.

He will head the group planning a national conference in Toronto in May, 1961, with performances or displays to illustrate the scope of the arts in Canada (**FP**, Dec. 19).

Jarvis recently resigned as director of the National Gallery of Canada, Ottawa.

U. S. Giant Buys Boyd Atom Patents

(CONTINUED FROM P. 1)

ually to be supplied with atomic energy.

If the government approach is wrong, it may cost Canadians a lot of money. It it's right and persisted in, we may save a lot.

The controversy now is likely to rage more furiously.

Almost certainly there will be more pressure for a change in official policy.

Meanwhile, Arthur D. Little—which has done considerable work in Canada — presumably will be looking for clients interested in developing and using the Daniels-Boyd nuclear steam generator.

The generator still needs much design and development work, it's understood. Work so far has been done largely by Boyd, with the reactor being of a general type first proposed by Dr. Farrington Daniels of the University of Wisconsin.

Background: Little has more than 1,100 employees, with annual billings recently soaring well over $10 million.

It brings research to bear on market and production problems. It has helped develop a variety of new products (breakfast food, missile fuel) and techniques (in process automation, for example).

Among others, Little has worked for **Standard Oil,** the Province of Manitoba, **Cream of Wheat, General Electric** and has grown rapidly since World War II.

Vertol Takeover Given Approval

MONTREAL (Staff) — Shareholders of **Vertol Aircraft Corp.** this week formally approved that company's takeover by **Boeing Airplane Co.**

Acquisition becomes effective March 31.

Under the arrangement, company reports, Vertol's management team will remain in being.

Canadian Vertol Aircraft Ltd. will remain a subsidiary answering directly to the Vertol headquarters in Morton, Pa.

As this issue has been sold, this advertisement appears as a matter of record only

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Basing to Head Wholesale Group

Bernard Henry Basing has been elected president of the Canadian Fruit Wholesalers Association.

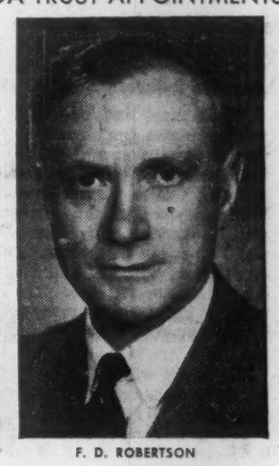
Mr. Basing is vice-president of **Dominion Fruit Ltd.** of Winnipeg. The association—a $400 million a year link in Canadian food marketing structure—last week held its 35th annual convention in Quebec City.

More than 600 delegates from Canada and U. S. attended.

ANNOUNCEMENT

HURON & ERIE — CANADA TRUST APPOINTMENTS

R. H. PATERSON

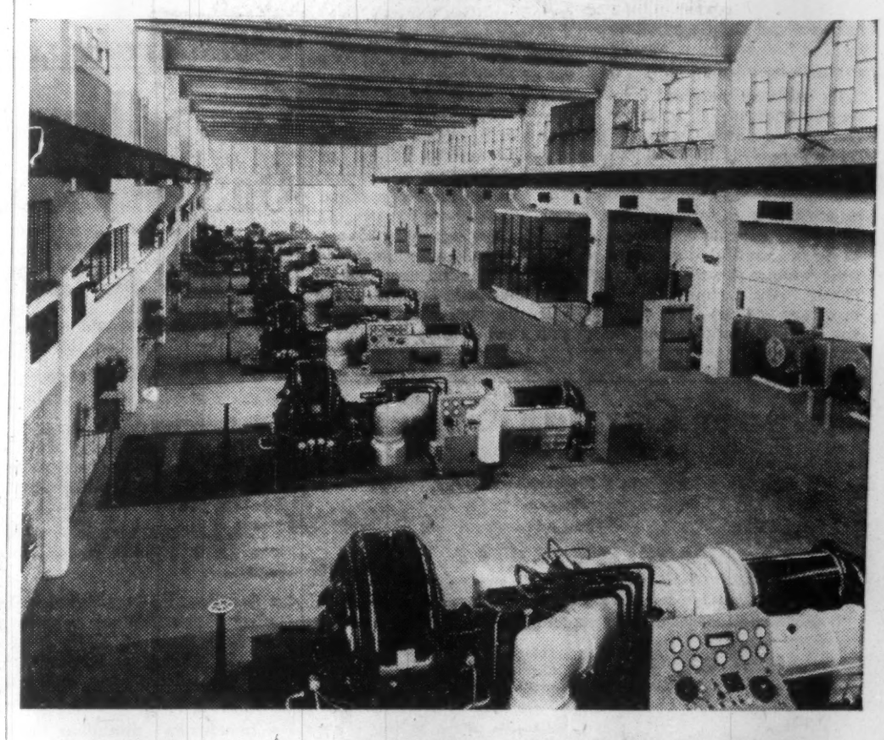


F. D. ROBERTSON

The Huron & Erie Mortgage Corporation and The Canada Trust Company announce the appointments of R. Hartley Paterson and F. Douglas Robertson as trust officers in the business development department of the companies' Toronto office.

Mr. Paterson, with a background of trust company experience, has held a number of senior administrative posts in government departments and in business.

Mr. Robertson has had extensive experience in business development work in industry and finance.



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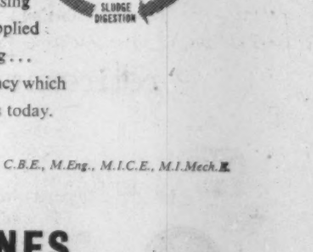

*Chief Engineer, London County Council: J. RAWLINSON ESQ., C.B.E., M.Eng., M.I.C.E., M.I.Mech.E.

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TORONTO
The Royal York Hotel (Tel: EM. 8-2511) 9th - 19th March

HAMILTON
The Royal Connaught Hotel (Tel: JA. 7-5071) 15th March

LONDON, ONT.
The London Hotel (Tel: 2-1801) 22nd and 23rd March

OTTAWA
Chateau Laurier (Tel: CE. 2-6411) 25th March - 8th April

Mr. Duns will be at:

VANCOUVER
The Vancouver Hotel (Tel: MU. 4-3131) 29th February - 10th March

EDMONTON
The Macdonald Hotel (Tel: 45181) 15th-17th March

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Bigger Sell Coming Soon on Hydro Heat

(CONTINUED FROM P. 1)

to be another 1,000 — not bad for the first two years and even less than that in active promotion.

● **Electric heat was installed in seven schools,** three churches, 12 motels, six apartment buildings, two office buildings and other miscellaneous smaller buildings.

● **A major shopping centre** in Toronto may swing to electric heat for 40 stores. It would use a heat pump, which would employ already-exhausted air from the stores to heat the development.

Experimental work in the U. S. should benefit electric heat development here.

National Electrical Manufacturers Association has just approved a new manufacturing standard for electric heating equipment.

It's expected that the Canadian Electrical Manufacturers Association will adopt a similar standard.

Electric Service League has specified that its Medallion homes will be completely electrically heated.

Electrical Heating Association of Ontario, which has already prepared installation standards, now has triple seal quality approval on electrically-heated homes. This means that manufacturer, contractor and EHAO give assurance that the entire installation meets requirements.

Ontario Hydro has just completed a survey of electric heat installations, and it claims full customer satisfaction where recommended standards have been followed.

No figures have been released.

Statistics may be available at the end of the heating season.

Residential electric heating costs are still figured at about 25% more than other types of heating, when the home is properly insulated for electric heat.

Commercial costs, Hydro men claim, have been good. A good selling factor: Electric heat offers substantial initial savings in commercial buildings over steam and hot water systems with all their associated equipment. Owning and operating costs with electric heat, therefore, should be quite comparable.

Other selling points:

● **Apartments:** Owner can let each tenant pay his own heating costs — not possible with central heating — and eliminate complaints about "too hot" and "too cold".

● **In a motel:** Double-setting thermostats allow owner to turn heat off, or down, in unoccupied units. That saves money.

Through installation and experimentation, Ontario Hydro, too, has been determining the best type of heating unit to use in various applications.

Examples: High density wall convection unit, with or without fan, near a door where fast heating is needed to counteract cold air pouring in when door is opened.

A new Etobicoke, Ont., building will have several different types of electric heat:

— **One section** will have a heat pump for summer air conditioning.

— **Smaller rooms** will have natural - convection baseboard heating equipment.

— **Fan-forced unit heaters** suspended from ceiling in large open areas — warehouse and stock rooms — will force warm air down.

Ontario Hydro keeps meticulous records on all installations. These may reveal valuable sales information.

A really different installation: "People heaters", in a rural church in Frankville, Ont., between Smiths Falls and Brockville, which is used only a few hours at a time and only intermittently during week.

Radiant heating units are spaced to cover the complete floor area of the church.

This system also is used in plants for spot heating in drafty areas.

Ontario Hydro is watching heat pump developments closely. At present, residential application in Canada is considered unlikely due to a cold climate. In more temperate parts of the U. S., they are used quite widely.

The heat pump draws heat from the outside air, can reverse itself to act as an air conditioning unit in summer.

Two things could bring more heat pumps on our markets soon:

- **They're being continually improved.**
- **A growing demand** for air conditioning in homes in summer.

A heat pump would reduce the cost of electric heat, it's claimed, since it produces about the equivalent of 2 kwh of heat for every 1 kwh of electrical energy it consumes.

This Deal Could Make N.B. Base Metals Hub

(CONTINUED FROM P. 1)

knowledge about the extent of the deposits.

Brunswick Mining success could mean a rash of development by major companies like **McIntyre Porcupine Mines, New Jersey Zinc, Anaconda Co. (Canada)** and others who have been working quietly for more than two years, laying the groundwork for tomorrow's mines in the Bathurst area.

A Brunswick associate, **Anacon Lead Mines,** has developed the New Larder U Island property with a shaft and also holds 790,000 Brunswick shares.

A Dutch-backed firm, **Nigadoo Mines,** also carried out extensive underground work before suspending and giant **Consolidated Mining & Smelting** went underground last year at its property in New Brunswick.

There are still some hurdles under the agreement worked out between Brunswick and **Sogemines Ltd.** Sogemines is the Canadian end of a Belgian organization with extensive worldwide interests, including Canadian cement, glass, chemicals and steel.

First obstacle is four deep drill holes to be drilled on the Brunswick property. Subject to this check, this is the deal:

● **Sogemines arranges the $17.5 million** necessary to bring Brunswick into production at a rate to handle 2,000 tons of ore daily.

● **Sogemines gives a 15-year contract** to take the lead and zinc concentrates produced. The sales contract is renewable for two five-year periods.

● **For arranging the $17.5 million,** Sogemines gets one million Brunswick shares. It already has an interest. This raises Brunswick outstanding shares to five million, all that are presently authorized.

Sogemines will arrange working capital of $2.5 million and is expected to take down debentures and provide some equity capital.

St. Joseph Lead Co., which has advanced more than $6 million to Brunswick, is expected to take down another $1.5 million in debentures. The U. S. lead firm retains its interest.

The key, says M. J. Boylen, president of Brunswick, is that Sogemines undertakes to arrange the $17.5 million, gets one million shares in a package deal.

Brunswick is assured markets for 15 years and can use this as a base from which to expand.

For the first five years of the agreement, Brunswick cannot build a smelter. Should it be able to expand operations, Sogemines gets first refusal on the additional output.

The plans for moving into the other stages have long been prepared. Governments have prepared for a deep harbor, a railroad to the mine.

Flow sheets for the mill have been developed after more than two years of pilot plant and laboratory investigation. One orebody is ready for mining.

The Maritime Provinces and world mining will be watching to see if the Bathurst camp can get off the floor this time and start moving up into the ranks of top metal suppliers.

Metro Halifax Population Grows

Population of metro Halifax increased from 107,474 in 1958 to 108,272 in 1959 and, for the same two years, taxable assessment rose from $276.5 million to $283 million.

Building permits rose in value to $18.8 million in 1959 from $13.2 million in 1958.

Some other 1959 totals (with comparable 1958 figures in brackets):

Dwelling construction: $6.7 million ($3 million).

Bank clearings: $2,070.7 million ($1,610.1 million).

Retail sales: $196 million ($192.1 million).

Customs receipts: $16 million ($15.6 million).

Waterborne cargo in and out of port: 8,100 million tons (6,964 million tons).

Vessels entering, 3,320 (2,923).

Net registered tonnage: 7,000,000 (6,368,600).

Grain shipments: 14 million bu. (13.5 million bu.).

PUBLIC RELATIONS ACCOUNT

Presentation of Canada Ltd. has been named to handle public relations counselling for **Seiberling Rubber Co. of Canada.** Presentation has head office in Toronto, associates in other Canadian cities, and is affiliated with **Ruder & Finn Inc.** of U. S.

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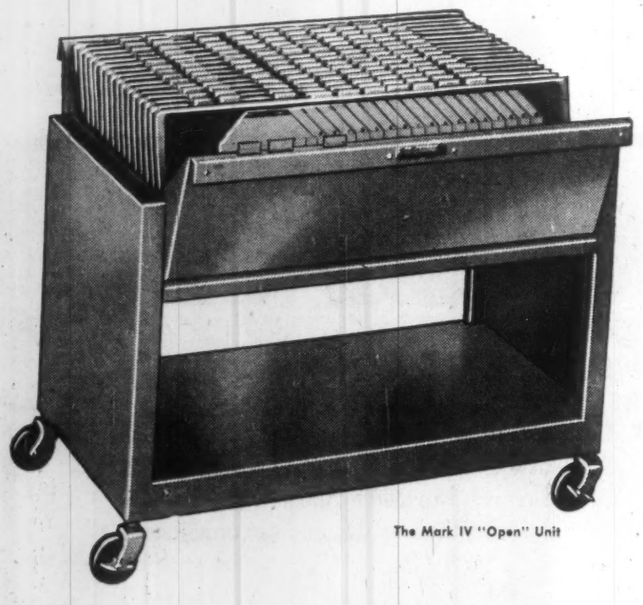

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Opposition Leader Spurns Pay Boost

From Our Own Correspondent

WINNIPEG — Some charitable cause yet unnamed is going to get a windfall of $1,000, less income tax, from former Manitoba premier D. L. Campbell.

The government is increasing sessional indemnities of members from $3,000 to $4,000, cabinet minister's pay from $8,000 to $10,000, that of the premier from $10,000 to $12,000, and the pay of the Opposition leader from $2,500 to $3,500.

Campbell will accept his indemnity increase but refuses to take the extra $1,000 as leader of the opposition.

Premier Roblin, introducing the bill, said pay of ministers and MLAs in Manitoba was considerably less than in other provinces.

The raises were reasonable and perhaps merited, said Campbell.

He admitted his own government had raised indemnities from $2,500 to $3,500 in 1954.

But this was not the time to do it again.

He moved that his extra $1,000 as opposition leader be eliminated.

He fought the issue for an hour.

He asked the House to accept his motion as a matter of personal privilege.

In the end he was voted down 41 to 10, one of his group, Elman Guttormson, St. George, voting against him.

Price Bros. Profit Up 3%

MONTREAL (Staff) — Net profit of newsprint-maker **Price Bros. & Co.** in 1959 was $5,920,945 ($2.62 per common share) or 3.3% higher than $5,731,376 ($2.52) in 1958.

This information was released in a preliminary statement of **1959 earnings.** Company's record **profit was $9.2** million ($4.09) in 1955.

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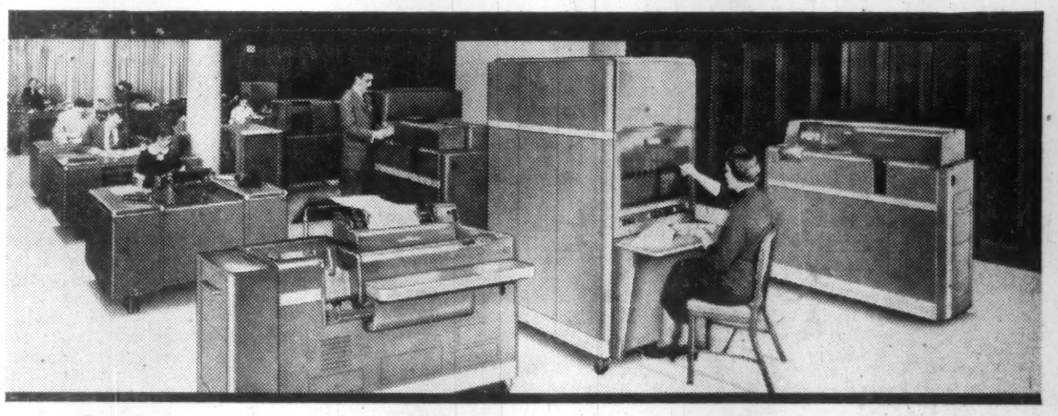

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ANNOUNCEMENT

D. K. SHALES, C.L.U.

D. K. Shales, C.L.U., Superintendent of Agencies, London Life Insurance Company, has been awarded the John A. Tory medal by the Institute of Chartered Life Underwriters of Canada. This award is made annually to the outstanding student among the graduates of the course leading to the designation of Chartered Life Underwriter. The medal was presented at the annual meeting of the Life Underwriters Association of Canada, which was held recently in Montreal.

GOLD PRODUCTION

Ontario's 30 producing gold mines turned out gold bullion worth $88,829,160 in 1959. Total of 9,224,526 tons of ore were milled, and 2,633,723 oz. of gold and 400,600 oz. of silver were recovered.

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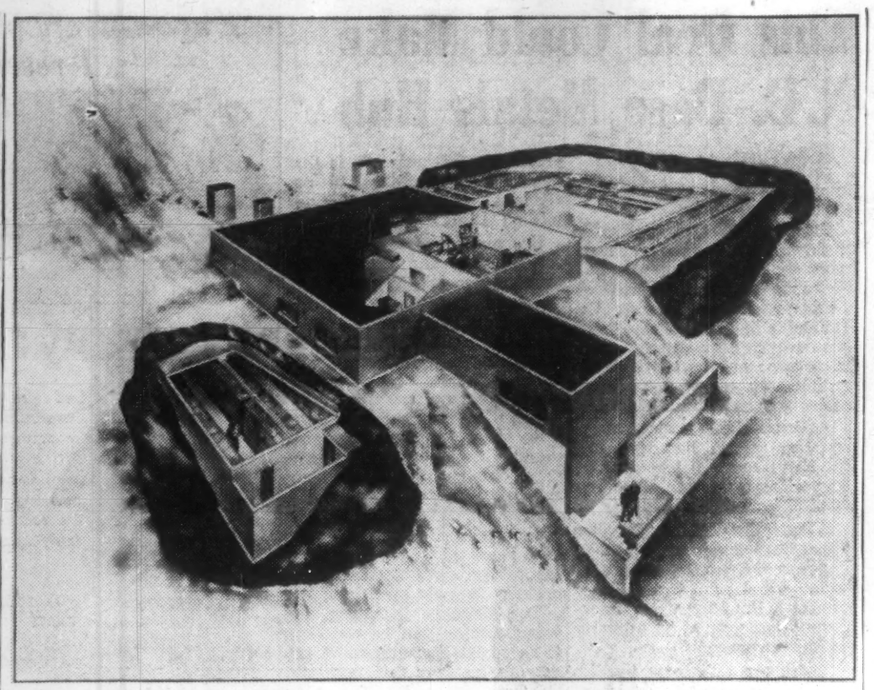

DESIGNER'S drawing of nuclear-proof storage vaults in Caledon Hills, Ontario.

This Nuclear Business Has No Uranium Woes

Ontario company is building a vault to protect your records from atomic attack —for a fee . . .

By JOHN McCALLUM

CALEDON, Ont. — Here's an idea for a "nuclear" business that has nothing to do with uranium:

A radiation-proof, blast-proof, fire-proof and burglar-proof vault for vital records, located far outside a major "target" city.

Record Security & Reproduction Ltd., Rexdale, Ont., is building such a vault into the foot of the highest range of the Caledon Hills, 50 mi. north of Toronto.

The company will store your irreplaceable records safely, it says, even through an atomic attack on Toronto. For a fee of course.

The company is reluctant to quote exact prices, but one company spokesman said a private vault of 1,000 cu. ft. might rent for between $2 and $2.50 cu. ft. per year.

Private vaults range in size up to 5,000 cu. ft. with a corresponding reduction in rate per cubic foot.

If you just wanted to store, for example, 100 rolls of microfilm in one of the vault's compartments it would cost you about $32 a year.

Leases can be arranged for a term up to 10 years.

The company expects to start construction April 1, and is offering discounts of up to 15% on space booked before that date.

It hopes to attract customers from industry, science and government.

The building will be sunk into the north side of a hill on the lee side of a nuclear wind blowing from Toronto.

The vault, its staff and all its records will be safe below ground until all nuclear fall-out has dispersed, the company claims.

It was designed to withstand nuclear attack, fall-out and holocaust.

The building will have a foot-thick layer of reinforced concrete for a roof, covered with a 4-ft. thickness of earth.

Only one expendable building and the entrance to the vaults will show above the surface.

The surface building will house microfilming units, microfilm viewing rooms and the company's administration staff, separated from the vault by the 5-ft. thickness of earth and concrete.

Access to the vault will be through a series of three air-tight, stainless steel doors that will be staggered and behind blast walls up the length of the concrete cave leading into the base of the hill.

The third door will lead into an air-lock into a corridor opening on the two main, bank-type vault doors.

All the entrance doors are being built by **Diebold Co. of Canada.**

The vault doors lead to two completely self-contained vaults — one for commercial documents and the other for government use.

Within each of these will be smaller vault units available to client companies or governments.

Clients will be able to contract for a vault unit large enough to house a small staff, complete with private telephone line, or they will be able to turn over their documents or microfilms for safekeeping in the vaults.

The building will be kept at a constant temperature of 68 deg. F, with a relative humidity of 48%.

All air intakes will be fitted with geiger counters, which will set off alarms when the degree of radiation shows any noticeable increase. The air intakes will be fitted with absolute air filters capable of removing all nuclear dust.

The vaults themselves will have a staff of about 25—mostly armed guards. Within the building there will be a segregated survival unit provided with food and everything the staff would require to survive for a month.

This compartment will have its own independent air conditioning unit provided with absolute air filters. It will also have an air-reconstituting unit, which will allow all outside air intakes to be cut off during the peak fall-out period.

During normal conditions, power will be taken from the public supply. A diesel generator will take over automatically with a power failure.

If necessary, the vault will survive should the diesel fail or have to be cut off. The air conditioning plant can be hand operated and batteries will provide an additional source of power.

All the vault's water supply will be drawn from a well to be drilled several hundred feet into the base of the mountain.

The building is being fitted with ultrasonic alarms. It will make its own sound pattern after it is set.

Movement of any sort will set off alarms, which will ring in the headquarters of the local constabulary, throughout the premises and in the guard captain's house.

The distant sound of a spade touching the outside of the concrete roof would break the sound pattern and sound the alarm.

Fire control throughout will be with carbon dioxide. Each private vault will have its own system set to operate with a slight temperature variation. If necessary, the gas can be introduced through the air conditioning system.

President of Record Security & Reproduction Ltd., is Garfield D. Chittick. Vice-president is Carl Durant, who is also president of **Aerocide Dispensers Ltd.**

Several major European companies, which now have vital documents stored in Toronto, have negotiated to have these deposited in the deep vaults.

Record Security has a sales agent in Europe.

Company says provincial and other governments, in Canada and abroad, are negotiating for underground space.

Giffels & Vallet of Canada Ltd. designed the structure. **E. G. M. Cape (1956) Ltd.** is the general contractor for the project.

Credit Foncier Boosts Dividend

MONTREAL (Staff) — **Credit Foncier Franco-Canadien** this year will pay an annual dividend of $2.50 per share.

This is a gain over the $2.25 paid in 1959 and $2 paid in 1958.

Net profit for 1959 was $1,642,397, up fractionally from $1,639,010 in the previous year.

Total assets of Credit Foncier at Dec. 31, 1959, were $92,049,880, up 4.7% from $87,887,641 a year earlier.

New "Put and Call" Service

We are pleased to advise that we have opened a "Put and Call" Department which is actively trading in puts, calls and straddles. This department has been set up to service brokers and institutional investors as well as individuals.

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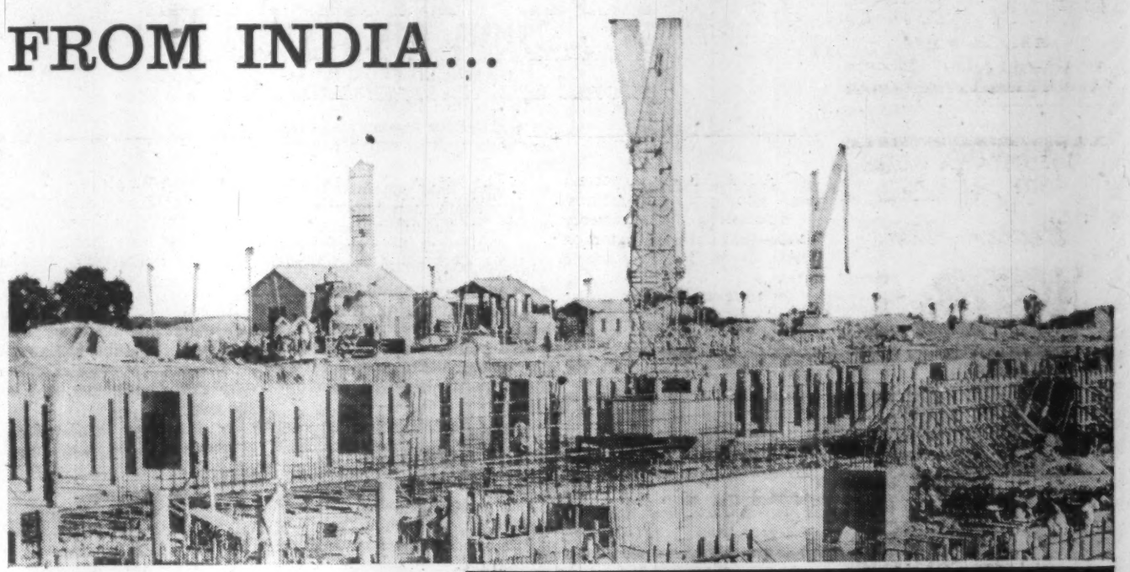
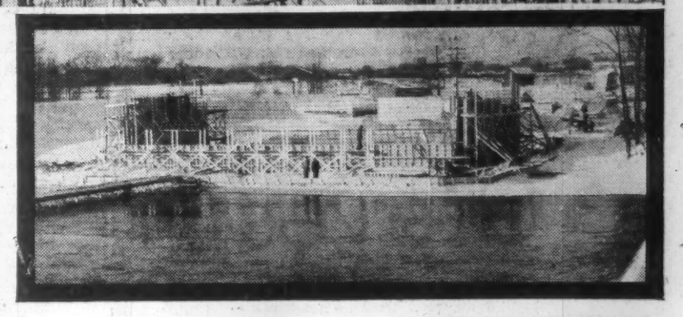
FROM INDIA...



Civil engineering work in progress, steel plant, Durgapur, India; for completion this year.

Hurdman's Bridge, Ottawa, under construction, 1955.



...TO CANADA

The Cementation Group licks engineering problems in twenty-five countries

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A single enquiry at any of our Canadian offices places a vast reservoir of technical and practical skill at your disposal—a permanent staff of 7,000 engineering and administrative "troubleshooters" . . . branch offices or subsidiary companies in every continent . . . forty years' experience in civil, mining and specialist engineering.

A growing list of Canadian clients, including provincial highway authorities, Rio Tinto Mining Company, Ontario Hydro, the Sifto Salt Company, Windsor Salt Company and many others have saved time and money — the Cementation way. Elsewhere in the world Cementation has often salvaged "write-off" operations.

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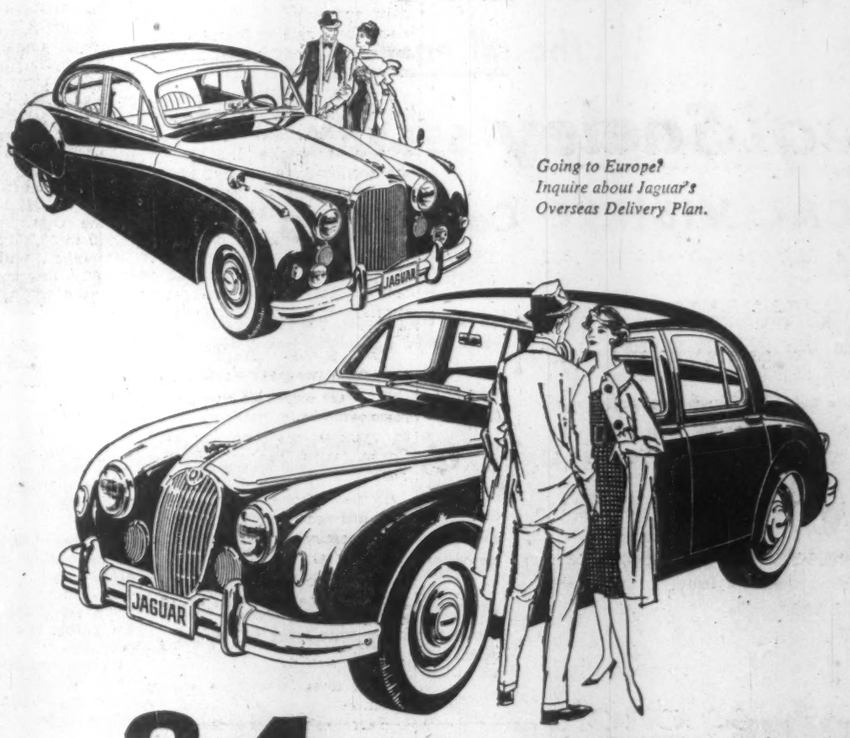

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INSIDE THE NEWS

A column of fact and comment on national and international affairs . . .

By J. K. EDMONDS

CANADIAN exporters should take an interest in discussions now reportedly under way in Washington on methods of financing world trade.

Nothing sudden is apt to occur, since the discussions are among expert advisers, not policymakers at this stage.

Core of the discussion is this:

Can the western world finance a rapidly expanding level of world trade on the basis of limited gold supplies plus dollars and pounds whose supply is affected by policies carried out for purely domestic reasons?

Will a purely mechanical problem make it impossible to reach the level of trade the world can and should carry on?

This was one of the problems of the postwar world that the postwar planners of World War II worried about.

Out of their worries came the Bretton Woods Conference and the International Monetary Fund and World Bank.

These were compromises, which have worked fairly well to smooth out financial tangles in the past 15 years.

But now that western Europe has regained its capacity to produce and Asian markets are opening up, the potential of world trade may outstrip the capacity of the existing financial machinery. Or at least, so goes the argument.

One scheme under discussion is the creation of a new international monetary unit to serve the purpose now served by gold and foreign exchange reserves — and to create a new international body to manage its supply (or modify the IMF and World Bank).

In effect, this would be a world central bank, charged with the job of seeing that the world's business was not hampered by too-tight money or demoralized by too-loose money. That would be quite a job.

This was one of the ideas tossed into the pot at Bretton Woods by Lord Keynes.

He suggested a unit called the "Bancor". The U. S. delegation proposed a "Unitas".

The notion of a new unit of international accounting is not entirely new.

When the wartime discussions were going on, Canada kept in very close touch, on the ground that few matters were of greater importance to **Canadian employers,** since many of the population developments outlined in the report will also occur here.

In particular, the "hole" in the labor force created by the low birth rates of the 1930s is common to both countries,

- **Back to the bancor?**
- **An earful of history . . .**
- **Manpower problems in the U. S. and Russia . . .**

Canada's future than the unimpeded flow of world trade.

For the same reason, Canadians should keep an eye on current developments in this field.

* * *

THE BOARD of Transport Commissioners got an earful of Prairie transportation problems at its hearings in Winnipeg, and watched Premier Duff Roblin make a submission that earned high editorial praise from the Winnipeg Free Press.

This is approximately the same thing as seeing praise for **Eaton's** merchandise in an ad for **Simpson's** stores.

Another surprise of the hearings was the appearance of a historian instead of the usual solid phalanx of economists.

Professor W. L. Morton of the University of Manitoba history department traced railway development in Canada as an element in an "imperfectly realized" national policy rather than an isolated economic problem.

In effect, he called Sir John A. Macdonald to testify as an expert witness in support of Manitoba's claim that present methods of determining rates should be re-examined.

* * *

"EMPLOYERS who do not abandon policies against hiring workers because of their age, or sex, or race, religion or nationality, or because they may be handicapped in some way, may have real trouble finding enough workers in the decade ahead."

This is one of the points made in a study of U. S. manpower problems of the 1960, prepared by the U. S. Department of Labor.

The study is well worth more than a glance from and the influx of new job-seekers in their late teens expected to begin soon and accelerate through the early 1960s is a problem both countries will have to handle.

Demand will grow fastest in the 1960s for professional and technical workers, according to the report. Another rapidly-growing area: Service industries and finance.

Russia has a hole in the labor force, too, according to results of the 1959 Soviet census; but the Russian "hole" is the result of wartime losses.

These affect two age-groups: 35 to 49 (who were in their late teens and 20s during the war) and the present teen-agers (who are scarce because of low birth-rates and high infant mortality rates in the 1940s).

Russia's population age-pattern is almost exactly the reverse of North America's.

That raises the interesting possibility that the gains in output achieved by Russia's fast-growing labor force in the past 10 years may now taper off, while North American output rises rapidly in response to the high rate of new entries into the labor market.

ANNOUNCEMENT
CLARK FOODS ANNOUNCEMENT

ROLAND DE VAUDREUIL

Mr. Lorne D. Clark, President, W. Clark Limited, Prepared Foods, announces the recent promotion and appointment of Roland De Vaudreuil as General Sales Manager. He will be responsible for the direction of the Company's Sales Policies throughout Canada.

Well known throughout the Grocery Trade, Mr. De Vaudreuil brings to his new post a record of successful experience in Sales and Food Merchandising.

Prior to his appointment, he was Eastern Division Sales Manager and responsible for Sales in Quebec and the Maritime Provinces.

RIDLEY SCHOLARSHIPS
The annual Scholarship examinations for entrance to Ridley College will be written April 4, 5 and 6, 1960.
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Margarine May be Pale In Manitoba

From Our Own Correspondent

WINNIPEG — In spite of recommendation of a government-appointed commission Manitoba's ban on colored margarine may not be wholly removed (**FP**, Jan. 30).

Prof. W. J. Waines, Arts and Science dean of the University of Manitoba, was named last summer to make findings "on the economic and social aspects of coloring margarine as it affects producers and consumers".

His report to the legislature early in the current session made one finding: "The ban on factory coloring of margarine similar to butter should be removed".

That, it was thought, would end an eight-year controversy.

It was expected a private member would bring in a bill to remove the ban, probably Conservative Richard E. Seaborn.

It was also expected that if the bill got to the House it would carry but maybe not by many votes.

Now there is doubt whether a private member will bring in a bill.

The government may bring in one of its own.

If it does it will be a compromise.

Farm and dairy interests are pressing hard to prevent factory coloring.

Now rural members have been shown there are eight different shades of yellow.

The likelihood is that legislation may provide that the lighter ones be reserved for margarine and the darker ones for butter.

It is certain the housewife is going to get colored margarine but maybe not the color she would like.

Private car for Miss Martin . . . at 5:03!

Well—not really—but there's no long wait for Miss Martin of the third floor since a Turnbull Traflomatic system has been installed. She gets "her" car just as quickly as all those girls up on the 14th. Now, she pushes the "down" button at 5:03 with a light heart because Turnbull Traflomatic remembers all calls and remembers them in turn.

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RESERVATIONS are now being taken for CNR's popular summer cruises to Alaska. The nine-day coastal tours from Vancouver cost $255 and up for each of two sharing a cabin.

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Food and accommodation: Good and reasonably priced.

Transportation: Excellent.

That's how a group of Canadian pulp and paper executives summed up the giant nation and its tourist amenities on a visit to the U.S.S.R. last fall.

The nine-man delegation was typical of the growing number of trade groups now traveling behind the Iron Curtain.

Their experiences will serve as a guide to others planning business or pleasure trips.

Like other visitors, all travel arrangements inside Russia were made through **Intourist**—efficient Soviet government travel organization.

In Moscow, the group stayed at the 30-story, 2,700-room **Hotel Ukraine.** Each of the Canadian businessmen had his own room and private bath. Cost: $3.50 per person per day.

At Leningrad, **Hotel Astoria** provided similar accommodation for $2.50 per day.

Most Canadian tourists find Russian hotels comfortable but often Victorian in decor and lacking some of the efficiency of modern North American hostelries.

One member of the pulp and paper group complained about the slow and inadequate elevator service at the Ukraine.

But they described Russian food as "good and inexpensive".

"Price for an evening out in a gay restaurant with good music and entertainment, dancing, food and drinks, about $5."

(Drinks would be native spirits and wines since imported liquors are not available.)

The Canadian vistors praised Russian transportation, found prices low compared to Canadian standards. For a 45-min. taxi ride in Moscow, fare was $2 with tipping taboo. (For official tours, the group traveled in long, black Zil limousines — similar to the 1948 Packard.)

Of Russian trains, a member of the delegation had this to say:

"As comfortable or more so, than ours, since the track gauge is six inches wider eliminating side-sway." But sleeping accommodation was crowded.

Like all visitors to Moscow, they marveled at the subway and its chandeliered, muraled stations — each one different from the others. The fare: 5c a ride.

For official tours of factories and mills the group was accompanied by two young interpreters and a senior representative of the paper industry. Guides were always on hand for sightseeing jaunts in free time.

Russian "culture" was prominently featured. Like most visitors to the U.S.S.R. the group was taken to the Tretyakov art gallery in Moscow and the Hermitage in Leningrad (housed in the old Winter Palace of the czars and rivaling the Louvre as one of the world's greatest museums).

They saw ballet at the Bolshoi Theatre in Moscow and the Kirov Theature in Leningrad. "Both theatres are magnificent and the performances were excellent."

Of Russian people in all walks of life, the general opinion was "exceedingly friendly."

Administrative officials, all well educated, were polite and pleasant.

Speaking about general living conditions in Russia, one executive said:

"There is a tremendous apartment building program going on in Russia. Millions of units will be built in the current seven-year plan ending in 1965.

"Type of construction is substantial but workmanship is poor. There is plenty of room for improvement in housing. But the people are convinced that conditions are improving.

"We visited one three room apartment that accommodated three separate families — each family occupying a single room while the bath, kitchen and hall were shared.

"Food seems to be in abundant supply, with prices controlled by the government. There were no signs of destitution or hunger in the areas we visited."

Another member of the group said: "Men and women in the various mills seemed content with their lot. The younger ones are particularly anxious to improve their education — best guarantee of advancement in industry."

There is much to see in Russia, and more westerners are going there to catch a glimpse of how "the other half lives."

But Intourist officials, recently in Canada to drum up more tourist business from here, claim that tourists no longer visit Russia out of curiosity alone.

They now come for a good time, and to encourage this idea, Russian travel promotion now emphasizes more holiday diversions such as hunting and fishing.

Hotels are being built in big cities and resort areas — with an eye to what dollar-bearing tourists want.

"Motel" is a new word in the Russian language.And this year, for the first time, motor tours, with or without chauffeur-guides will be featured.

Travel is free in Russia and more individuals are "doing it" on their own. But the majority still travel in groups — mainly because it is cheaper.

For first class accommodation, meals, sightseeing, etc., each member of a group would pay about $17.50 a day. (This is slightly more than "official" visitors such as the Canadian pulp and paper group.)

For tourist class A or tourist class B accommodation, the daily, all-inclusive group rate is about $10 to $12.50 per person.

SUBWAY, RUSSIAN STYLE: This is the subterranean vestibule at the Avtovo station of the Leningrad Metro, or subway.

If you travel on your own, you must take deluxe or "pension" accommodation.

For deluxe service, including superior hotel room, three a la carte meals plus afternoon tea, private car and guide and some inter-city transportation, the daily tab would be about $30 per day.

For pension accommodation (lower in standard than tourist B) the daily rate for individual travel would be as much or more than first class group travel. The reason: Guides, cars, etc., are more economical when shared.

Canadian travel agents are offering more special tours of Russia and other Iron Curtain countries. Some start in Europe, so they can be taken in conjunction with independent travel abroad.

A typical 72-day motor coach tour including U.K., Benelux, Scandinavia, East and West Germany, Poland, Czechoslovakia and 30 days in Russia with a Black Sea cruise thrown in, costs $1,194.80 from London, Eng.

Water-Musical Will Boost Thousand Islands Tourism

A novel "water-musical", to be staged next summer at Gananoque, Ont., is expected to pay big dividends for charity as well as for the local tourist industry.

To be sponsored jointly by the Rotary Clubs of Gananoque and nearby Kingston, the $50,000 project is designed primarily as a money-raising scheme for the service organizations' work with crippled and underprivileged children.

But it is being hailed by motel operators and shopkeepers in the area as a big new tourist attraction.

Gananoque, gateway to the Thousand Islands area of the St. Lawrence and a busy tourist centre in July and August, is within 200 mi. of five million residents.

Kingston, a few miles away, shares in the annual influx of U. S. and Canadian visitors.

First show of its kind in Canada, the performance will be a gay, satirical musical, featuring synchronized swimming instead the usual "land" ballet and dance.

Responsible for the idea, producer of the show and song writer is Kingston musician Jack Telgmann.

"Corps de water ballet", will be the Peterborough (Ont.) Ornamental Swiming Club. The 24 girls, expertly trained by Mrs. Pansy Forbes, have already achieved considerable fame. Last year, the group went on an overseas tour, performing in many big U. K. centres.

Plans are now underway for the construction of a 100 ft. by 60 ft. pool, with a depth of 12 ft. and suitably designed to permit easy change of elaborate scenery.

Tentative site of the poolstage is the Gananoque Tourist Park, located on the St. Lawrence riverfront. A covered grandstand with 800 seats is on the drawing boards.

Scheduled to open next July 4, the show will run for eight weeks, with two, 2-hr. performances daily.

Already, tourist operators on the U. S. side of the river have announced they expect to offer "package boat tours", featuring the new water theatre.

COMPREHENSIVE GUIDE to entertainment in the U. K. gives detailed information on theatre, concerts, opera, ballet and festivals—including famous and lesser-known, specialized events. Available free of charge from the British Travel Association, the attractive 24-page, four-color booklet is entitled Theatre and Music in Britain.

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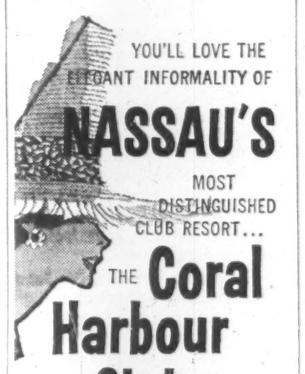

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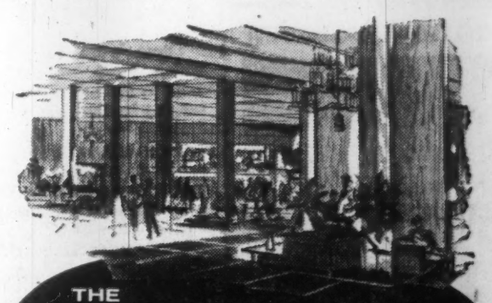

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Over one month	*14.4*
Many take more than one vacation — each at different seasons:	
Spring	*15.2%*
Summer	*60.8*
Autumn	*14.1*
Winter	*15.2*

**73% of Post readers take their vacations away from home.*

Source: Gruneau Research.

The Financial Post

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ANNOUNCEMENT

R. E. GROUT

The appointment of R. E. Grout as a vice-president of The Shawinigan Engineering Company Limited has been announced by R. E. Heartz, president. Mr. Grout was formerly chief engineer, Electrical Division.

NEW FABRICATOR

Strippit Tool & Machine Co., a unit of **Houdaille Industries Inc.**, has a new model of a fabricator designed for punching, notching and nibbling, particularly for prototype work, short or medium production runs.

Egypt Studying Canada As Buyer and Supplier

MONTREAL (Staff) — Quebec textile and food processing companies were being examined last week by an Egyptian with ambitions for greatly increased trade.

He was Mohammed Shedid, administrator of Egypt's **Misr** import-export agency.

Egypt wants to sell Canada cotton and rice.

At present, exports of these commodities to Canada amount to little more than experimental batches.

If the trade can be built up, Shedid told **FP**, Egypt has a long list of products it wants to buy from Canada.

Biggest single potential deal discussed so far is the purchase of $6 million worth of diesel locomotives from **General Motors (Diesel)**, London, Ont.

This is being handled by Montreal import-export dealer Roy G. Peers — who has been appointed Misr's Canadian agent (**FP**, Oct. 17).

But this and other deals hang on a provisional increase in Canadian purchases.

Shedid reports that Canadians he has dealt with have been friendly and prepared to talk business.

But Egyptian cotton is of a higher quality than the average imported from the U. S., and Canadian textile firms don't seem interested right now in switching to the higher grade yarn.

Rice, too, is plagued by the question of a relatively high Egyptian price level.

However, the trade picture may improve later when Egypt begins to reap the rewards of the ambitious Aswan High Dam project.

Then it is hoped that fruit and vegetables will be available in commercial export quantities.

Target figure for Misr:

A two-way Canadian-Egyptian trade of $10 million annually in five years' time. Right now it is under the $1 million mark.

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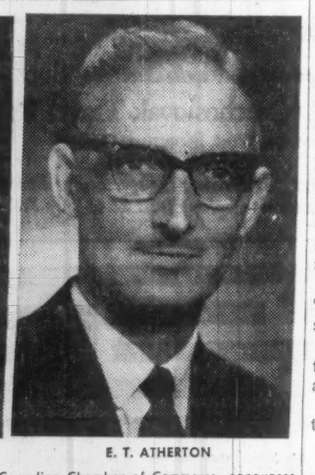

E. T. ATHERTON

D. L. Morrell, General Manager of The Canadian Chamber of Commerce, announces the appointment of A. W. Eastmure as Special Representative, and Wing Commander E. T. Atherton as Ontario Representative with headquarters in the Canadian Chamber's Ontario office located in Toronto.

Mr. Eastmure recently retired as Managing Director of the Casualty Company of Canada after forty years service in that capacity. Following a period of apprenticeship with The Toronto General Trust Corporation and World War I service, Mr. Eastmure joined the Casualty Company founded by his father.

Wing Commander Atherton has completed 31 years of service with the Army, RCMP and RCAF. Before retirement from the service, he was Chief Administration Officer, RCAF Station Trenton. Prior to joining the Chamber staff, he was with Wells Organizations of Canada Limited.

● THE BUSINESS CLIMATE

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Ontario Firm Plans Halifax Parking Centre

From Our Own Correspondent

HALIFAX—Merchants in the Nova Scotia capital claim they've been losing business for years due to lack of downtown parking space.

They are backing a proposal from an Ontario firm wanting to build a seven-story parking garage in one business section.

Meanwhile City Planning Director K. M. Munnich has been aware of the parking problem. He has come up with a redevelopment scheme for providing parking space in another section of the city.

The Ontario firm, **Peel Ltd.** of Toronto, has placed this proposition before the city:

—Help to acquire the property (bounded by Hollis, Sackville and Grandville).

—Remove parking meters in the immediate area.

—Give tax concessions.

The parking garage, drive-in style, would accommodate 350 cars.

Attempts to purchase the land by the company were halted by a high price-tag. The company is prepared to lease the land from the city, once acquired.

The town planning director's scheme is based on the findings of the Stephenson redevelopment report.

The area would accommodate 275 cars, running along the rear of Spring Garden Rd., in an area viewed by many businessmen as the commercial region of the future. The town planner's scheme would also include two pedestrian shopping malls.

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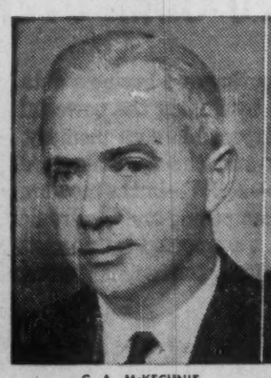

C. A. McKECHNIE

D. D. PHELAN

H. M. BAILEY

W. R. Hodgson, President of Hodgson Holdings, is pleased to announce the following appointments:

Charles A. McKechnie as General Manager and Director of Hodgson Development Limited, the Skyline Hotel Toronto, Limited, and the Skyline Hotel Montreal, Limited. Mr. McKechnie has been associated with Hodgson Holdings for the past six years.

Daniel D. Phelan as Manager of the Skyline Hotel Toronto, Limited, and this autumn to assume the Managership of the Skyline Hotel Montreal, Limited, now under construction. Mr. Phelan assumes his position with 14 years of experience in the hotel industry, formerly being associated with a large hotel chain.

H. M. Bailey as Manager of Hodgson Development-Real Estate Division. Mr. Bailey is widely known in the real estate field and was a former director of the Toronto Real Estate Board.

Napier Moore's

Scratch Pad

LONDON columnist Peterborough says that Marie, Marchioness of Willingdon, who died recently at the age of 84, "will be remembered by many survivors of the old Indian Civil Service for the strength of character she displayed during her husband's viceroyalty.

"He tells how she upset Sir Edwin Lutyens, famous British architect, by replacing his carefully worked out color schemes for the viceroy's house in New Delhi by a "pervasive mauve."

Not a few Canadians also will remember her strength of character during Lord Willingdon's term as Governor-General of Canada.

Willingdon himself could be whimsical about it at times.

Once, following an Ottawa Press Gallery dinner, he was chatting with correspondents about newspaper references to himself.

He said that when, as plain Freeman-Thomas, he was serving as aide to the Governor-General of Australia, a newspaper reported that among those present at a big race meet was "Mrs. Freeman-Thomas with, as usual, her husband in tow."

With a broad smile he added, "I have been in tow ever since. She towed me into viceroyalty and the governor generalship — and she'll probably tow me out."

* * *

IN THE COURSE of a long journalistic career I have met quite a number of famous feminine concert and opera singers, but I cannot think of one who for sheer naturalness has charmed me more than Elisabeth Schwarzkopf, who gave a memorable recital in Nassau the other evening, and who left for Montreal to appear on TV.

Apart from a magnificent voice, she has, both on and offstage, a personality that would melt a stone.

We took her to see Nassau's famous performing flamingoes, a flock of 50 beautifully-hued birds trained by Hedley Edwards to march, about-turn, halt, charge and dismiss on the word of command.

They also appear like a corps de ballet and stand still while visitors photograph each other in their midst. They love applause.

Schwarzkopf was entranced. "They're artists," she said. "Artists must have applause!"

And she led the hand-clapping with genuine gusto.

* * *

ANCHORED in Nassau harbor at the moment is the big, luxurious ocean-going motor yacht Shemara.

She is owned by British industrialist Sir Bernard Docker. His wife is the Lady Norah Docker who heretofore has never suffered from publicity-shyness.

It will be recalled that the Dockers have been banned from Monaco by Prince Rainier III and Her Serene Highness Princess Grace (Kelly) because Lady Norah, in a peevish moment, tore up a Monegasque flag; her son not having received an invitation to an event at the royal palace. The ban also extends to the French Riviera.

So far in the Bahamas, apart from doing some water-skiing, Norah hasn't caused a ripple.

To get back to the yacht, in addition to the owners' sumptuous quarters there is accommodation for 10 guests. There are seven bathrooms. She carries a crew of 30.

I mention this merely because if you would like to rent Shemara it is whispered that she can be chartered for a trifling sum — about $60,000 per month. That includes running water.

* * *

THE OTHER EVENING, we were summoned outside by a lurid glow in the sky, which painted the sea crimson. It was the most dramatic sunset I have ever seen.

Shafts of flame shot into the heavens from a cauldron like the cone of Vesuvius in its onetime fury.

I walked down to a rocky point where, on the jetty of a next-door club, a lone figure stood. I motioned toward the awesome panorama.

With a clipped English accent, and with feeling, he said, "It reminds me of the night of the great blitz of the City of London. I was an air raid warden."

Four thousand miles and 20 years away.

That afternoon I had read Drew Pearson's account of a telephone conversation with a self-styled Nazi Party leader in the District of Columbia who boasted that "Storm Troopers" would distribute Hitlerian literature in Washington.

I had read reports from the U. S. mid-west of high school students daubing swastikas on synagogue walls; reports from Germany of the growth in influence of former Nazi officials.

I came back into the house feeling rather sick.

North Bay to Get Big Shop Centre

A $2 million shopping centre is planned for North Bay, Ont.

Webin Community Consultants, development division of **Toronto Industrial Leaseholds**, will start work immediately.

To be known as Northgate, the project was recently tentatively approved by North Bay's municipal council.

Centre will occupy about 12 acres at junction of Fisher St., and the bypass highway, north of the city.

It will have some 30 stores and principal tenants will probably be **Woolworth's** and **Loblaw's**.

Planning and development consultant firm, which will also handle tenant negotiations, is **John W. Combs Ltd.**, and architect is **Ian Martin & Victor Prus. Kelmar Construction** will supervise on construction.

Plans include a bowling alley, farmer's market, park and covered, landscaped walks. Completion is scheduled for six months' time.

Expansion to surrounding area, involving about 20 acres, will follow.

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For the convenience of our customers doing business in Jamaica, and to serve the banking needs of the rapidly developing North Coast area, we have opened a fifth branch in Jamaica at Montego Bay. This new Canadian Bank of Commerce branch offers complete banking service. Other branches in The West Indies and Bahamas are at your service in Kingston, Half Way Tree, Port Antonio and Ocho Rios, Jamaica; Bridgetown, Barbados; Port of Spain, St. James and San Fernando, Trinidad and Nassau, Bahamas.

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BR-170

NEW ISSUE

$15,000,000

Canadian Chemical Company, Limited

(Incorporated under the laws of the Province of Alberta)

SINKING FUND DEBENTURES, 7% SERIES A

To be accompanied by Stock Purchase Warrants

To be dated March 1, 1960 — To mature March 1, 1980

Principal and semi-annual interest (March 1 and September 1) and redemption premium, if any, payable in lawful money of Canada at any branch in Canada of the Company's bankers. Coupon Debentures in the denomination of $1,000 registerable as to principal only and fully registered Debentures in denominations of $1,000 and authorized multiples thereof.

The Series A Debentures shall be redeemable at the option of the Company, in whole at any time or in part from time to time, on not less than thirty days' notice at 100% of the principal amount thereof together, in cases where redemption is made for purposes other than sinking fund, with a premium thereon commencing at 7% of such principal amount in respect of Series A Debentures redeemed up to and including March 1, 1961 and thereafter decreasing by .40 of 1% of such principal amount for each year or portion thereof elapsed after March 1, 1961 to the date fixed for redemption until March 1, 1978, after which there shall be no premium; together in each case with accrued interest to the date fixed for redemption; provided, however, that no Series A Debentures shall be called for redemption prior to March 1, 1970, as part of any refunding operation involving, directly or indirectly, the incurring of indebtedness having an annual interest rate lower than 7%. When redemption is made for sinking fund purposes no premium will be payable.

The Company will covenant for the benefit of the holders of the Series A Debentures to retire by purchase for cancellation or by redemption by call for the purpose of a sinking fund $500,000 principal amount of such Debentures on March 1 in each of the years 1962 to 1970 inclusive, and $1,000,000 principal amount of such Debentures on March 1 in each of the years 1971 to 1979 inclusive. Such sinking fund requirements will provide for the retirement of 90% of the Series A Debentures prior to maturity. The Company will reserve the right to purchase Debentures on the market, by tender, or by private contract for the purpose of sinking fund or otherwise at any price not exceeding the price at which the Debentures on the date of purchase are redeemable for other than sinking fund purposes plus costs of purchase.

Stock Purchase Warrants

The Sinking Fund Debentures, 7% Series A, when issued in definitive form on November 1, 1960 or earlier date, at the option of the Company, but not earlier than May 1, 1960, will be accompanied by Stock Purchase Warrants in bearer form entitling the holders thereof to purchase Common Shares without nominal or par value of the Company, as presently constituted, at the rate of 50 such Shares, in respect of each $1,000 principal amount of Debentures, at the following prices:

$7.25 per share
if purchased at any time up to the close of business on March 1, 1964;

$8.50 per share
if purchased thereafter at any time up to the close of business on March 1, 1967;

$10.00 per share
if purchased thereafter at any time up to the close of business on March 1, 1970.

The Indenture providing for the issue of the Stock Purchase Warrants will contain provisions designed to protect the holders thereof against dilution, under certain circumstances, of their purchase rights. Reference is made to page 5 of the prospectus for certain further details concerning these Stock Purchase Warrants.

TRUSTEE: The Royal Trust Company

In the opinion of Counsel, the Series A Debentures will be investments in which companies registered under the Canadian and British Insurance Companies Act may, without availing themselves for that purpose of the provisions of sub-section 4 of section 63 of said Act, invest their funds or any portion thereof.

We offer, as principals, $15,000,000 principal amount Sinking Fund Debentures, 7% Series A, if, as and when issued and received by us and subject to prior sale and subject to the approval of all legal matters by Messrs. Hugessen, Macklaier, Chisholm, Smith and Davis, Montreal, Que., on behalf of the Company, and by Messrs. Howard, Cate, Ogilvy, Bishop, Cope, Porteous & Hansard, Montreal, Que., on our behalf. These two Counsel will rely upon the opinion of the Company's Counsel in Alberta, Messrs. Lindsay, Emery, Jamieson, Chipman, Sinclair & Lambert, Edmonton, in respect of the validity of the incorporation and organization of the Company, the title to the assets of the Company in Alberta, the nature and extent of the security for the said Debentures in that province and also in respect of all matters of local law in Alberta.

PRICE: 100 and accrued interest to yield 7.00%

It is expected that Series A Debentures in interim form, carrying a September 1, 1960 interest coupon, without Stock Purchase Warrants will be available for delivery on or about March 8, 1960. Definitive Debentures when issued will be accompanied by the Stock Purchase Warrants referred to above.

A prospectus, a copy of which has been filed with the Registrar of Joint Stock Companies of the Province of Alberta in accordance with the provisions of the Companies' Act of the Province of Alberta will be promptly furnished upon request.

Nesbitt, Thomson and Company, Limited		Wood, Gundy & Company Limited
A. E. Ames & Co. Limited	Dominion Securities Corpn. Limited	McLeod, Young, Weir & Company Limited
W. C. Pitfield & Company, Limited	James Richardson & Sons	Greenshields & Co Inc
Royal Securities Corporation Limited	Gairdner & Company Limited	Cochran, Murray & Co., Limited
Pemberton Securities Limited	Ross, Knowles & Co. Ltd.	René-T. Leclerc, Incorporée
L. G. Beaubien & Co. Limited	Osler, Hammond & Nanton Limited	Bankers Bond Corporation Limited
Midland Securities Corpn. Limited	Harris & Partners Limited	Mills, Spence & Co. Limited
Equitable Securities Canada Limited	The Western City Company Limited	Dominick Corporation of Canada
Burns Bros. & Denton Limited	Collier, Norris & Quinlan Limited	R. A. Daly & Company Limited
Anderson & Company Limited	Bartlett, Cayley & Company Limited	F. J. Brennan & Company Limited
Carlile & McCarthy Ltd.	D. M. Duggan Investments Limited	Eastern Securities Company Limited
Fry & Company Limited	Houston, Willoughby & Company Limited	Okanagan Investments Limited
Sydie, Sutherland Limited		H. C. Flood & Co. Limited

942A

ANNOUNCEMENT

NEW HOWARD SMITH DIRECTOR

JAMES N. SWINDEN

has been elected to the Board of Directors of Howard Smith Paper Mills and subsidiary companies succeeding the late Howard Murray. Mr. Swinden, General Manager of the Argus Corporation Limited, is a Director of Huron Forest Products Co. Ltd., British Columbia Forest Products Limited and Hinde and Dauch Paper Co. of Canada Ltd. He is also an executive officer and director of many other Canadian companies.

$10,000 FOR SAFETY

A cheque for $10,000, twice its normal contribution, has been presented by the Canadian Automobile Chamber of Commerce to the Canadian Highway Safety Council. A similar amount was contributed to the council last month by All Canada Insurance Federation.

MacNab's Portfolio

A Managed Investment Account

Invested in 1944 ..... $10,000
Account latest valuation .. $39,029

Time to Upgrade?

Current softness of the stock market makes it advisable to upgrade security portfolios wherever possible, MacNab's manager says.

Apart from gas pipeline stocks, he doesn't hold out much hope in the immediate future for the speculative market.

For investors seeking income, there appears to be some excellent bargains on the bond counter, both in high grade and corporate groups, the manager says.

Here is his report:

A very rapid and substantial decline has occurred in the New York Stock Exchange industrial averages during the early part of 1960. This is contrary to forecasts of the experts who were prophesying a good market for the first quarter of the current year.

Business news continues to be good, in the steel, oil, utility, chemical, automobile and some other specialized industries, and should continue so for the first half and probably all of 1960.

Earlier forecasts by analysts of 700 to 750 for the Dow Jones industrial index seem to have been overly optimistic. The index was recently at 620 and will in all probability go lower. It is forecast that the support level will be around 600.

For those investors with balanced portfolios who are buying for the long pull and are getting a fair yield on their capital, it would seem advisable to upgrade portfolios wherever possible.

For the speculator, the market does not hold out too much hope in the immediate future. Probably the gas pipeline stocks hold the most promising potential at the moment.

The bond market has taken a turn upward and the Bank of Canada sold $115 million of Treasury Bills on Feb. 11 for an average yield of 4.75%. This compares with a record high of 6.41% on Aug. 31, 1959 and a record low of 1.12% on July 31, 1958.

There appear to be some excellent bargains in the bond market for investors seeking income, both in the high grade and corporate groups.

I am holding the bonds in MacNab's account and adding to them from time to time.

I bought $1,000 **Home Oil** convertible 15-year debentures at par for the account on Jan. 25, paying for them through sale of 50 shares of **Molson's Brewery** B at $24 on Feb. 2.

'If a Firm Stops Growing It's Starting to Decline'

In business, you cannot depend on a "period of comfortable maturity."

This is the theme of a new 34-page booklet on long-range planning for small and medium business, published by **Cities Service Petroleum Inc.**

When a business stops growing — in size, profitability or quality — it starts declining, the booklet points out.

Five chapters provide basic requirements for setting up a growth program, assistance in marketing research, in financing capital outlays and in budgeting working capital.

"How to Build a Bigger Business" is No. 8 in a Cities Service series of booklets started last year.

Some highlights of new book:

- **Careful planning** is necessary for successful expansion. Without a plan, an operator tends to lose himself in day-to-day details.
- **Key factor** in growth is proper selection of sites in growing market areas. For this, you need statistical information on local economy.
- **Every year,** new customers must be attracted — just to break even, since there is a normal 5%-10% loss of customers annually to many businesses.
- **Investment** in a market analysis will pay off in vital information. Even small business can and should use market research as a business tool.
- **Control** of working capital is most difficult phase of financial planning. But working capital requirements must be planned and budgeted.

Copies of booklet may be obtained from the company at 60 Wall St., New York 5, N.Y.

Ottawa's Spending Plans Chill Aviation Industry

MONTREAL (Staff) — News that the government doesn't plan to buy any new equipment this year has sent a chill wind through the aviation industry.

A number of projects — all enthusiastically backed by the military—are waiting hopefully for government support.

With a proposed cut of $99 million in procurement spending none of them seem likely prospects for 1960 or 1961.

Most pressing of these in the military's eyes is a large order for helicopters that has been hanging fire for over a year.

The two main contenders — **Vertol** and **Sikorsky** — have been busy wooing Ottawa.

Both have given substantial subcontracts to Canadian firms for U. S. business and hinted at much more to come if Ottawa buys their designs (FP, Jan. 9 and Nov. 14).

Vertol has gone so far as to say it would open a Canadian factory if it got the nod.

What worries the Canadian industry most of all is that if the big pair lose heart about an Ottawa order, subcontracts may dry up.

Another project with little hope from this year's budget is **Canadair's** sprightly little CL-41 two-seat jet trainer.

This is now flying and initial test reports are favorable.

The RCAF badly needs a new basic trainer to replace its weary Harvards, and most world air forces are now using jets for all pilot training (FP, Nov. 7).

When it was decided to order 200 Starfighters to replace the Sabres now used overseas, many airmen thought a new trainer would follow automatically.

To date Canadair and its suppliers have footed the bill for development.

Export orders could follow if it gets into production — and Canadair designers have kicked around the idea of a four-seater as a 400-mph executive taxi.

But if the RCAF isn't going to order it, the CL-41 is almost certainly dead.

While the U. S. Army remains the brightest potential customer for **de Havilland's** twin-engined Caribou bush plane, it was no secret that a Canadian military order was much discussed during recent months.

The Canadian Army feels it needs a new dimension in mobility and that the Caribou along with big helicopters could supply it.

A Canadian order at this time, industry observers feel, would greatly improve the plane's sales appeal in Washington.

Nobody in the industry seriously expected Ottawa to announce it was going to build a replacement for the aged CF-100.

But pressure from the U. S. to do something about the nine home-based squadrons of near museum pieces was expected to produce some results.

About four years ago there was a program under discussion to modernize the CF-100 up to the point where it could carry guided missiles.

It would mean limited employment at **Avro's** Malton plant.

The necessary missiles could lead to orders in the U. S. with resulting subcontracts here.

But this would be stopgap which airmen feel might be too expensive for the present national mood.

Betting in the aviation industry:

A steady decline in jobs over the next 18 months as present defence work expires.

Allied Chemical Plans New Plant

Allied Chemical Canada plans early start on construction of an anhydrous aluminum chloride plant at a southwestern Ontario location. A Sarnia, Ont., site is under consideration.

Anhydrous aluminum chloride is used as a catalyst for manufacture of petrochemicals. Allied Chemical is already a major supplier of this commodity to the Canadian market.

Profits Here?

A regular listing of latest studies by investment firms.

OIL SHARES—Hugh Mackay & Co., 235 St. James St. W., Montreal.

HOLLINGER CONSOLIDATED GOLD MINES — Morgan & Co., 507 Place d'Armes, Montreal.

ELECTRONICS INDUSTRY — Merrill Lynch, Pierce, Fenner & Smith, 11 Adelaide St. W., Toronto.

LABRADOR MINING & EXPLORATION CO.—Morgan & Co.

Farmers Studying To Build Sewers

From Our Own Correspondent

WINNIPEG—Manitoba farmers will get a short course in plumbing so that they can put in their own water and sewer facilities.

The government will buy pipes and septic tank material in bulk and sell it to the farmers at savings of up to 30%.

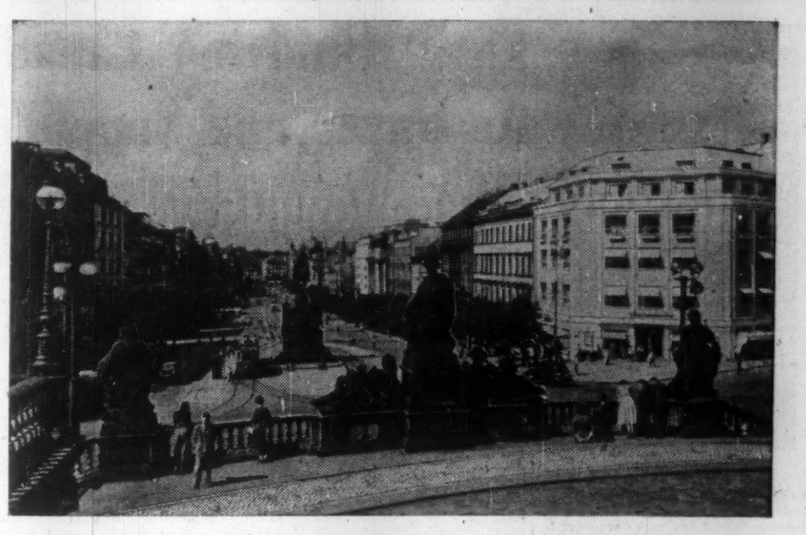
Where it can be arranged mass shipments will be used to save on transportation costs.

The plumbing courses will be set up where at least 15 farmers are interested. Fee is $10.

Department of Agriculture engineers will visit the farms and lay out plans adequate for the premises and estimate costs.

If the farmer chooses, he may have the work done by government crews or local contractors at his expense. In any case, inspection staffs will make spot checks.

About 7% of Manitoba's 49,000 farm homes have sewer and water facilities.



Wenceslas Square, as seen from the National Museum. This is the boulevard of Prague—one of the largest squares in Europe.

See the real glory of Europe visit PRAGUE.

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Prague . . . a fascinating blend of historical cultures and modern comforts. City of majestic castles dating back more than a thousand years . . . magnificent churches that stand as masterpieces of architecture . . . breath-taking statues and monuments . . . lavishly beautiful gardens.

Surrounded by a sportsman's paradise of lush forests and streams, where the world-famous Czechoslovakian spas are nestled in modern splendor. A shopping treasurehouse of renowned Bohemian glass, precious jewellery and finely crafted textiles.

A single day in Prague could be the most treasured memory of your European trip.

See your travel agent, or write direct to:

CEDOK / Czechoslovak Travel Bureau
1305 Pine Avenue West, Montreal, Quebec

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Please send me prospectus and information on The North American Fund of Canada Limited.

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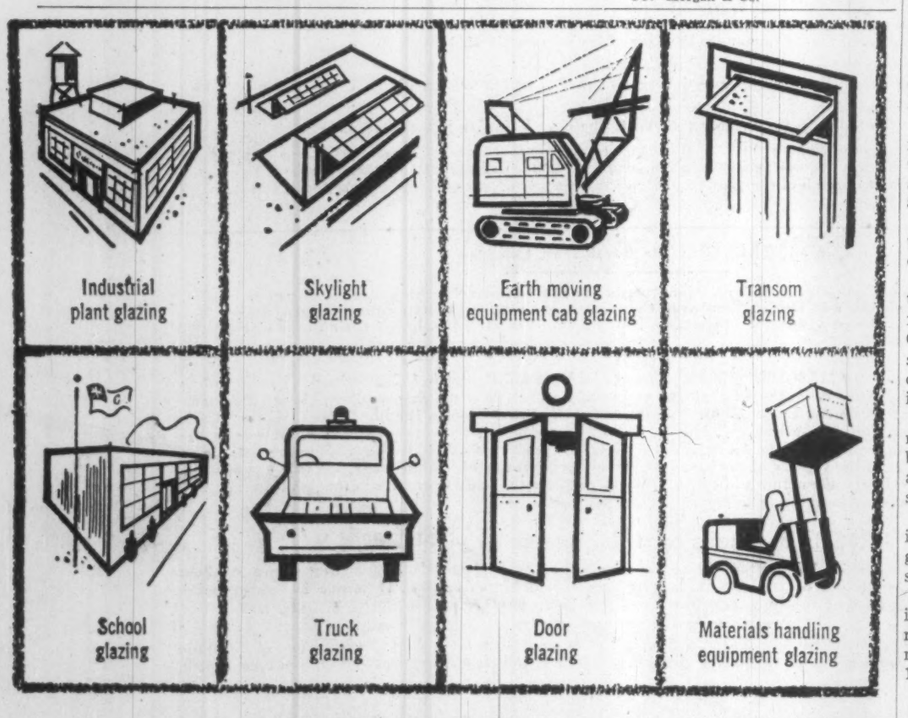

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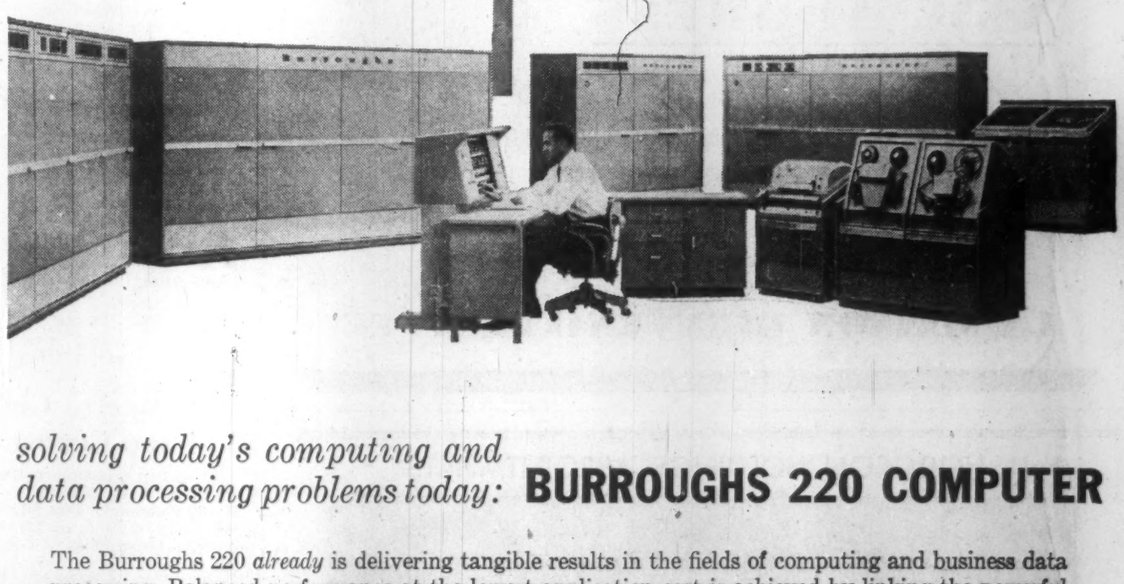

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ANNOUNCEMENT

APPOINTED DIRECTOR

BENOIT BENOIT

Benoit Benoit, who recently was elected to the Board of Directors of Credit St Laurent Inc. (St. Lawrence Credit Corporation). Mr. Benoit is president and general manager of La Generale de Commerce Insurance Company in St Hyacinthe, president and general manager of Canadian Mercantile Insurance Company, general manager of Canadian National Insurance Company, director of Phenix Finance Inc. and director of Provincial Bank of Canada.

ATHLONE AWARDS

Two graduate engineering students at the University of Saskatchewan—Herbert D. Barber of Strasbourg, Sask., and John A. Nilson of Regina — have won Athlone fellowships to study and work in the U. K.

Wage Boost Ends Strike at Magog

MONTREAL (Staff) — Labor peace has returned to the Quebec textile industry.

This week the National Federation of Textile Workers (CCCL) signed a new two-year pact with **Dominion Textile Co.**, ending a bitter, 4½-month strike at company's Magog, Que., print works.

Terms were similar — except for some retroactive pay—to the settlement reached between Dominion Textile and United Textile Workers of America (CLC) last week (**FP**, Feb. 13).

Workers of both unions will get 10c hr. pay boost in the first year of the new contract plus an additional 3c hr. increase in the second.

The contract also provides for 8c hr. retroactive to July 8, 1958, in the case of UTWA workers and a similar amount retroactive to June 11, 1958, for most, but not all, NFTW workers.

Workers of both unions will get one additional annual holiday with pay under the new contracts, raising total to eight.

Only difference between the two settlements affects 1,800 NFTW workers who were on strike at Magog and 367 workers at company's Sherbrooke mill, closed a month after the Magog strike began.

These workers will get 10c hr. retroactive for the period between the end of the previous contract and the start of the strike or mill closure.

The settlement is estimated to cost Dominion Textile about $6 million over the term of the contract.

Big problem confronting the company now is to get the Magog mill in operation again.

Company officials told **FP** first task will be to determine what can be salvaged out of materials and orders on hand when the strike began and which could not be delivered to customers.

Work is progressing at top speed to rehabilitate the machinery and equipment at the Magog mill. Possibility of some rust damage is feared.

Next step will be to see what orders can be obtained for printed materials going into fall garment lines.

While company has designs in hand, some traditional customers undoubtedly have made arrangements to obtain fabric requirements from other sources.

Reason: Dominion Textile — until this week—was not able to offer firm delivery dates.

Third phase will be to prepare samples of company's fabric range to be offered to the garment trade for the spring, 1961, lines.

Deadline for preparation of the range is the end of June.

Company officials are hopeful it can be met.

While cost of the strike has not been determined, its effect on company's earnings in the fiscal year ended March 31, 1960, will be significant.

One result of the strike was to choke off about one third of company's normal dollar earnings during the period of stoppage.

Company officials told **FP** that the strike cost Dominion Textile a substantial portion of its normal Christmas business and the January "white goods" sales in many lines.

In addition company has lost out heavily on fabric sales normally made to garment trade for production of the latter's spring lines.

Industry observers believe a substantial proportion of printed fabric demand lost to Dominion Textile has probably been supplied from U. S. sources.

HOUSING PROJECT

Central Mortgage & Housing Corp., has awarded a $998,475 contract to **Tellier & Groleau Inc.**, Three Rivers, Que., for construction of 125 low rental units in the federal-provincial project at Cornwall, Ont. Completion is scheduled for November, 1960.

Newsprint Output Up In January

MONTREAL (Staff) — The Canadian newsprint industry entered 1960 on a buoyant note, following its production boom during the last half of 1959.

Output was up 7.4% in January.

Production per working day was up a fat 11.4%.

There was one less working day in January, 1960, than in corresponding 1959.

Mills operated at 85.5% of capacity in January this year, 77.4% a year earlier.

Rate for full 1959 was 85%.

The all-important figure for U. S. consumption was up 9.3% in January compared with a year earlier.

It's estimated about one third of this increase is accounted for by an extra Sunday this year.

Sunday papers gobble up large quantities of newsprint.

Here are comparative details:

	January 1960	1959	% Incr.
	—Tons—		
Output	527,440	491,138	7.4
Shipments to U.S.	397,040	376,107	5.6
Total Shipments	493,761	465,940	6.0
U.S. Consumption	579,381	530,078	9.3

Union Carbide Expands Again

Still in the midst of its latest expansion program at its big Montreal East petrochemical plant **Union Carbide Canada** has announced a further multi-million dollar program at the same site.

The latest project, the fifth expansion in as many years, involves doubling of existing productive facilities for ethylene oxide and oxide derivatives.

When completed, in first quarter of 1961, the Montreal East plant will become one of Canada's largest chemical complexes.

Union Carbide will also expand the Welland, Ont. and Beauharnois, Que., plants of its Electro Metallurgical Co. division.

This project will include installation of a new rotating hearth electric furnace at Beauharnois and construction of new facilities at Welland to manufacture mammoth pre-baked carbon electrodes required in operation of the furnace.

The Montreal East petrochemical plant converts petroleum refinery gas concentrates into a diverse range of chemicals, all derived from ethylene.

These include ethylene oxide, glycols, ethanolamines and glycol ethers.

Some of the major applications for these chemicals are in the manufacture of synthetic fibres, explosives, anti-freeze, brake fluids, gasoline additives and detergents.

They are also widely used as solvents and for removal of impurities from natural gas.

In addition to chemicals, the Montreal East plant produces polyethylene resins and compounds.

This unit is undergoing its third major expansion program, started in 1959.

When completed later this year, capacity will be boosted by 60% to 65 million lb. annually.

The new rotating furnace being installed at Beauharnois will be used for production of high-quality silicon alloys, particularly high-purity silicon metal.

This plant is the only Canadian producer of silicon metal. The furnace will have a capacity of 5,000 tons annually.

Carbide Chemicals Lets Contracts

Carbide Chemicals Co., Division of **Union Carbide Canada Ltd.**, has announced the award of contracts in connection with a multi-million-dollar expansion of its Montreal East plant.

Besides design work handled by the company's own engineering staff, these firms have been awarded major contracts to date on the chemicals phase of the expansion program:

Project engineering firms: **Montreal Engineering Co.; Stadler-Hurter & Co., Integrated Consultants Ltd., Felix M. Kraus.**

Construction contractors: **Foundation Co. of Quebec, Cook & Leitch Ltd., Walter G. Hunt Co.**

Fabrication shops: **Canadian Vickers Ltd., Crane Ltd., Dominion Bridge Co., Montreal Locomotive Works Ltd.**

All are Montreal firms. **Foster-Wheeler Ltd.**, St. Catharines, Ont., and **Riverside Steel Works Ltd., Quebec City**, also won fabrication contracts.

Over 600 engineers, draftsmen and construction workers will be engaged on the polyethylene and chemicals expansion projects currently under way at the Montreal East plant.

Bigger Stake in Containers For Big Newsprint-Maker

MONTREAL (Staff) — Giant **Canadian International Paper Co.** continues to get bigger and more completely integrated, with acquisition of control of **Hendershot Paper Products Ltd.**, Burlington, Ont., producer of containers and specialty products.

CIP vies with **Abitibi Power & Paper Co.** as the nation's top newsprint producer, having annual capacity of about 930,000 tons in three locations (Abitibi has over 950,000 tons). It also has been expanding in such fields as kraft pulp, multi-wall sacks, hardwood panels, insulation products and containers.

Hendershot Paper was controlled by **Mindustrial Corp.**, Toronto holding company. Mindustrial held 57% of outstanding common and accepted the CIP offer of $9 per share and $3 per warrant (**FP**, Jan. 2).

Identity of the Hendershot purchaser remained unconfirmed for weeks, However, strong rumor said it was CIP (**FP**, Jan. 9).

CIP says its offer to buy Hendershot common and warrants will remain open "for the time being". More than 85% of shares and warrants have been deposited already.

CIP hasn't announced its plans for Hendershot, which recently has been losing money. However, it's apparent the big firm is intent on widening its container know-how and capacity. Late last year, for instance, it announced decision to build a Montreal research lab to promote better packaging in corrugated containers and bags.

CIP's march toward vertical integration has been steady. Last year it brought about a considerable realignment of wholesale distribution of specialty papers by purchasing **Anglo-American Paper Co.** of Toronto and its subsidiaries operating in Eastern and Western Canada.

In earlier years, CIP — a subsidiary of **International Paper** of the U. S. — acquired Canadian woodland and kraft pulp operations of **Brown Co.** (1954), **Hygrade Containers Ltd.** (1955) and has been expanding in such fields as multi-wall sacks, hardwood panels, insulation products, various containers.

Meanwhile it has a $10 million expansion program under way at the La Tuque, Que., kraft operation.

Royalite Oil Earns $600,000

Net operating earnings of **Royalite Oil Co.** for 1959 are estimated at approximately $600,000.

In addition company realized $2,804,000 from sale of part of its interest in reservations in the central Alberta foothills, which was credited directly to retained earnings. Working capital at year end is estimated at over $7 million.

Sales volumes of gasoline, heating oils and diesel fuels through company outlets increased approximately 10%.

During the year, 46 additional marketing outlets were acquired bringing total retail and bulk stations to 642 at year end.

Increased refinery runs at Kamloops and Saskatoon more than offset the effect of suspending operations of the Coleville and Prince Albert refineries. Operating results were reduced substantially as a result of economies initiated in 1958.

Company participated in 28 wells compared with 22 wells in 1958. Although number of wells owned by company decreased as a result of sale of company's interest in the Coleville field, production income was maintained as a result of the acquisition of additional wells in southeast Saskatchewan.

Natural gas sales increased 22% over previous year.

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ANNOUNCEMENT

CANADIAN LIQUID AIR APPOINTMENTS

JAMES E. WILKIN — M. V. BREBER — GORDON C. NAYLOR

Mr. H. Dolisie, President of Canadian Liquid Air Company, Limited, announces the following appointments effective immediately.

Mr. James E. Wilkin, formerly Secretary of the Company, is appointed Secretary-Treasurer. Among his other official posts, Mr. Wilkin is Comptroller of L'Air Liquide, manufacturing affiliate of Liquid Air, and Assistant Secretary of American Air Liquide, the Company's U.S. sales organization for low temperature gas separation plants. He joined Liquid Air in 1946.

Mr. M. V. Breber, C.A., B.Comm. (McGill), Manager of the Accounting Division, is named Assistant Treasurer of the Company. Prior to joining Canadian Liquid Air, Mr. Breber was associated with Sharpe, Milne and Company. He is a member of the Chartered Accountants Institute of Quebec.

Mr. Gordon C. Naylor, B.B.A. (Michigan) previously Assistant to the General Manager, is appointed Manager of the Control Division. Joining the Company in 1953, Mr. Naylor has held a number of supervisory posts in various Head Office departments.

The February issue of

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Will Rogers, referring to his Indian blood, remarked that his ancestors did not come over on the Mayflower, they met the boat! As the pioneer Trust Company of Canada, Toronto General Trusts though hardly reaching back so far has been in business a good many years. May we suggest that you will find it worthwhile to draw on our long, practical experience when setting up plans for your own estate. Telephone our nearest office for an appointment. You will incur no obligation.

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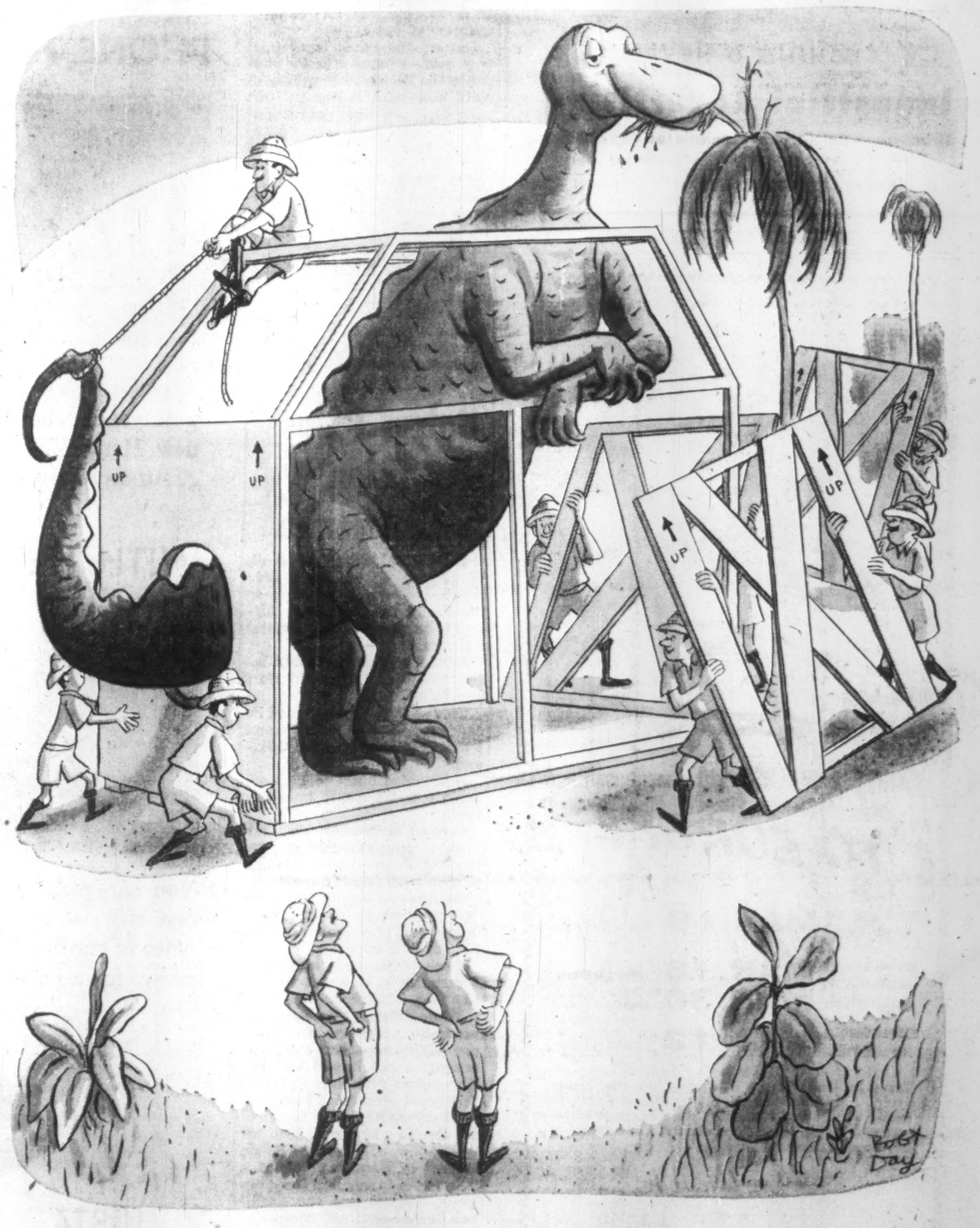

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Move in U.S. To Bar CL-44 Gets Powerful

This openly protectionist bid could become a big issue between the U.S. and Canada . . .

MONTREAL (Staff)—Strong forces in the U. S. administration are pressing their plans to stop Canada winning any substantial share of the estimated $600 million air freighter market in the U. S.

That fact was made very clear last week in Washington at hearings before the Senate aviation subcommittee.

It could become a major issue between Ottawa and Washington in the months ahead.

The root of the trouble, from Canada's point of view, is proposed legislation introduced by Senators Mike Monroney and Stuart Symington that would guarantee loans to U. S. airlines providing they buy U. S. - built air freighters (**FP**, Jan. 30).

At first the bill's sponsors presented it simply as a means to a military end for improving the U. S. strategic air transport reserve.

At last week's hearings all pretence was dropped.

It now presented as a straight protectionist move to guard the U. S. manufacturing industry from inroads by a hot Canadian aircraft.

Here are some high points:

• **Federal Aviation Agency administrator** E. R. Quesada told the subcommittee that the value of air freighters likely to be purchased under the legislation was over $600 million.

He set out specifications that must be met by any new plane wanting to fill this joint civil-military requirement.

Only **Canadair Ltd.'s** CL-44 turbo prop airfreighter meets these requirements.

• **Lockheed Aircraft Corp.** told the subcommittee that given firm orders for 100 machines it could produce a suitable plane within 30 months.

• **Quesada added that one of the main reasons** behind the bill was to bolster the U. S. airframe manufacturing industry now faced with the threat of serious unemployment.

He cited one "existing and typical" company that now employs 23,000. By 1961, at the present rate, employment would be down to 12,000; 4,000 in 1962 and 1,500 in 1963.

To Canadian airmen the message was clear:

Air freight is an exciting new field and the U. S. plans to keep the work at home.

The legislation is strongly opposed by a group of major U. S. carriers.

These include:

American Airlines, Eastern Airlines, Flying Tiger Line (which already has ordered CL-44s) and **Pan American World Airways.**

Their main objection is that the bill would virtually subsidize purchases of aircraft by smaller carriers which couldn't otherwise afford to compete.

For Ottawa the issue poses a difficult question.

It is practical politics for the U. S. to keep that sort of rich business at home.

But on the other hand this is a semi-defence matter, and one of the Diefenbaker cabinet's most successful moves so far was the defence production sharing agreement that gave Canada an equal chance to compete for U. S. orders.

The CL-44 was developed with Ottawa's backing at a time when the U. S. industry appeared asleep at the air freight switch.

Ottawa appreciated the design's potential as a world seller.

Now that Canada's investment looks like paying off many times over, Washington is moving fast to block its success.

Lillooet is Cornerstone Of B.C. Power Struggle

From Our Own Correspondent

VANCOUVER — The tiny, little-known community of Lillooet, some 115 mi. north of Vancouver, is rapidly becoming a focal point in the tangled British Columbia power picture.

It looms as the key station through which either Columbia River or Peace River power may be fed to Greater Vancouver.

And it may become the site of one of the country's biggest thermal power projects.

British Columbia Electric, the big private utility company on the West Coast, has exercised an option to buy a massive, low-grade coal deposit in the Lillooet area.

The price tag for the property: almost $2 million.

The proposal:

To locate a thermal plant virtually atop the deposit and generate 2.6 million hp.

The over-all price tag: $200 million.

It's an "insurance" project.

The B. C. utility must have a large new source of power in the late 1960s to meet soaring energy demands.

If Canada and the U. S. are unable to reach early agreement on Columbia River development, or if Peace River power sounds too expensive, B. C. Electric (it's an operating subsidiary of **B. C. Power Corp.**) will resort to thermal generation just east of Lillooet.

The coal deposit is up to 2,000 ft. thick.

Mining engineers estimate there are 340 million tons in a 1 sq. mi. area, plus probable reserves of at least as much again.

Huge mining machines, believed of German design, would rip off the overburden, take dozens of tons of coal at a bite, deliver it to a conveyor belt and it would be carried to the furnaces.

It could be stockpiled at the plant, it's estimated, for perhaps 65c a ton.

B. C. Electric now generates hydro power in the Lillooet region at its two Bridge River projects.

And it has two rights-of-way and transmission lines running from Lillooet to Vancouver.

It is certain that Peace River power would be delivered at Lillooet, and it is becoming apparent that the small Cariboo district community similarly would be the most economic point to deliver Columbia power destined for metropolitan Vancouver.

Lillooet — astride the route the miners followed in the days of the Cariboo gold rush — now takes an even more prominent role in the power picture because of the utility company's "insurance" thermal power plan.

It's a big role for a community of 1,450.

B. C. Electric purchased the coal claims from **Inland Resources Ltd.,** Vancouver, which is two-thirds owned by **Wilson Mining Corp.,** Vancouver.

Most of the $2 million goes to two brothers and a sister, R. W. Wilson, Keith Wilson and Mrs. Barbara Foreman.

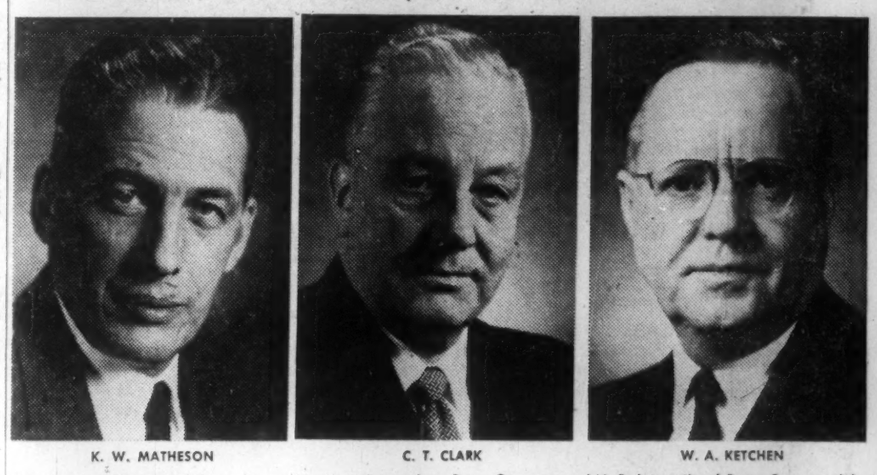
Their father, Ridgeway Wilson, convinced the deposit some day would prove of value, held it at heavy cost for 16 years, refusing to believe that coal was a lost fuel even in hydro-rich British Columbia.

Ridgeway originally acquired the property for **Ventures Ltd.,** the big eastern Canada mining company. After doing some work on it, however, Ventures lost interest.

Western Development and Power, another subsidiary of B. C. Power Corp., took the option in 1957.

ANNOUNCEMENT

FRASER COMPANIES, LIMITED APPOINTMENTS



K. W. MATHESON — C. T. CLARK — W. A. KETCHEN

The Board of Directors of Fraser Companies, Limited recently announced the election of K. W. Matheson as Vice-President of the company, succeeding L. M. Sherwood who has retired. They also appointed C. T. Clark as Vice-President — Manufacturing and W. A. Ketchen as Vice-President — Technical Services.

A graduate of Dalhousie University and a member of the Bar of New Brunswick, Mr. Matheson joined the Fraser organization in 1933. Subsequently, he organized the legal department of the company and occupied various executive positions. He was Assistant to the General Manager prior to his recent appointment as Vice-President.

After attending Mount Allison University, Mr. Clark worked with the St. George Pulp and Paper Co., Nashwaak Pulp and Paper Company, and N. B. International Paper Company, joining Frasers as a chemist at the Athalville, N.B., pulp mill in 1933. He was named Divisional Chemist, Assistant Mill Manager, and in 1945 Mill Manager of the Athalville mill. In 1954 he was named Manager of the Company's pulp and paperboard mills at Edmundston and now becomes Vice-President — Manufacturing.

W. A. Ketchen was graduated from McGill University with the degree of B.Sc. Chemical Engineering in 1928. That year he joined the company's subsidiary, Fraser Paper, Limited as chemist at its mills in Madawaska, Maine. In 1936 he was named Chief Chemist of the company and in 1954, Technical Director, the position he held prior to his new appointment as Vice-President — Technical Services.

ANNOUNCEMENT

J. A. MURPHY

E. V. Rechnitzer, President, MacLaren Advertising Co. Limited, announces the appointment of J. A. Murphy as a Senior Account Executive.

Mr. Murphy, a graduate of the University of Toronto, joins MacLaren Advertising after having held important advertising and public relations appointments with leading financial institutions.

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'Bolam' Plans Expansion In C. America

MONTREAL (Staff) — **Bank of London & Montreal Ltd.,** which operates 20 branches in the Caribbean area, plans further expansion in Central America.

Details will be announced later, President G. Arnold Hart said at midweek.

This week the bank opened its new four-story headquarters building in Nassau in the Bahamas.

A Trinidad office at Port-of-Spain is to be opened later this year.

Formed in October, 1958, the bank is jointly owned by the **Bank of Montreal** and the **Bank of London & South America.**

At its inception it took over 14 branches which are being modernized. Six branches have been opened since then.

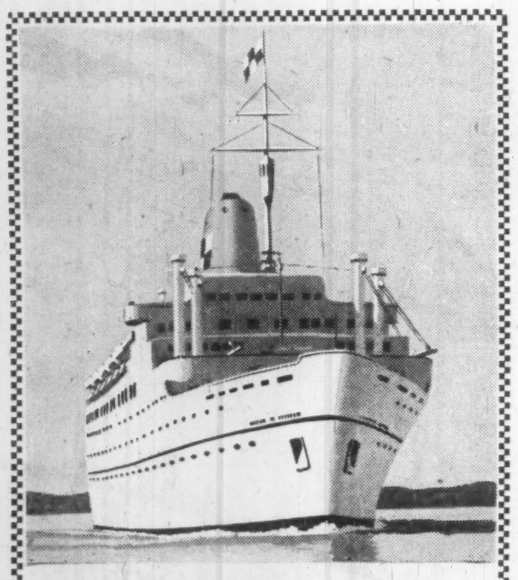
Bank of Montreal regards its investment in the joint venture as a long-term proposition.

While "Bolam" is operating profitably, earnings are being poured into expansion and modernization and it will be some time before dividends accrue to the parent companies, Hart said.

Chairman Arthur C. Jensen of the Bank of Montreal, who attended the opening of "Bolam House" in Nassau, predicted a substantial increase in trade between Canada and the Caribbean in the next few decades.

He said it would extend to all goods now being traded between Canada and the region served by the bank.

"Bolam" has branches in the Bahamas, Jamaica, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua and Venezuela.



WHITE EMPRESS thrift season sailings

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SPECIAL SAILINGS FROM NEW YORK TO LIVERPOOL — MAR. 16 — Empress of Britain

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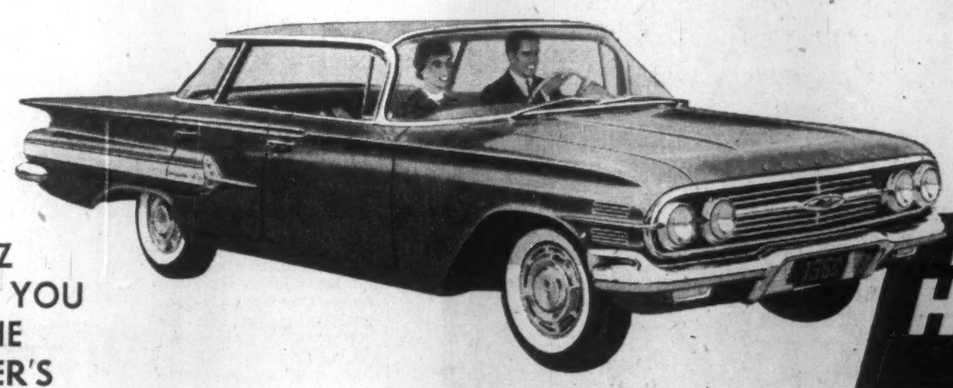

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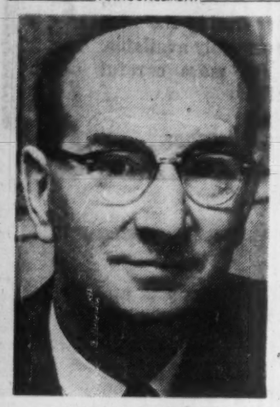
ALSAMA MOVES OFFICE

Alsama Industrials Ltd. and **Western Canadian Processors Ltd.** move their offices from 618—8th Avenue S.W. to 635—6th Avenue S.W., Calgary, on March 1.

ANNOUNCEMENT



FRANK H. KERNAGHAN

Frank H. Kernaghan re-elected President Canada's oldest Board of Trade in Halifax, N.S. General Manager, Simpsons-Sears Limited. Active in community affairs being vice-president of the Y.M.C.A., director Maritime Division C.N.I.B., member of A.P.E.C. Associated with Mr. Kernaghan heading the 1,900-member Board and directing the vigorous community active program are Vice-Presidents Victor deB. Oland and Manuel I. Zive.

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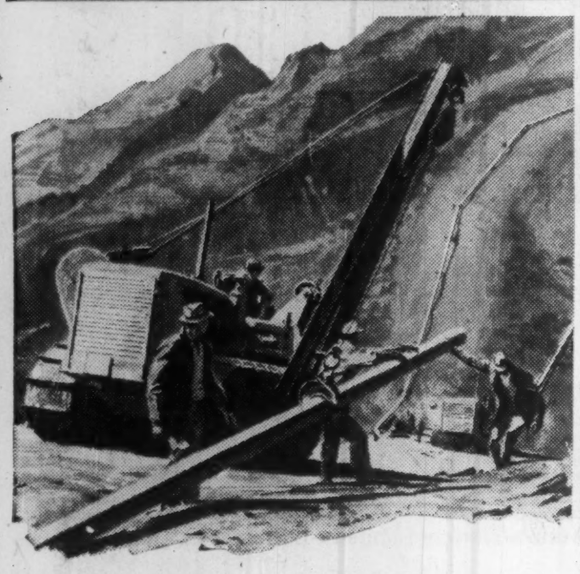

Insuring a hazardous installation of oil pipeline over the Bolivian Andes

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U. K. Business Still Growing Steel Output May Be Up 20%

A LONDONER'S FINANCIAL NOTEBOOK

STEEL ouput in the U. K. reached a new record level last month. January production was at an average weekly rate of 471,400 tons, against the previous highest rate of 458,600 tons in November, 1959.

The latest figure represents an annual rate of 23.6 million tons, or about 17% more than output in 1959.

For 1960 as a whole, production is expected to show a 20% improvement on last year.

Of the expected increase in home steel demand in 1960, about half is likely to come from increased consumption and half from a building up of depleted stocks.

Although demand for some products, such as heavy rails and plate for shipbuilding, has yet to revive, ingot-making plant is now working almost to full capacity.

At the annual meeting of **Stewarts & Lloyds**, in Glasgow, Chairman A. G. Stewart said that the improvement in home trade and in general exports was being maintained and prospects were good.

Demand for steel tubes from the oil industry was still disappointing, though the oil companies were likely to take a larger tonnage from them this year than in 1959.

At the end of its last financial year, Stewarts & Lloyds had outstanding capital commitments of £19 million and the directors are considering further expansion of capacity.

Sales of the group's Canadian subsidiaries, which include **Stewarts & Lloyds of Canada** and **Stanton Pipes (Canada)**, were maintained last year, despite keen competition from Japanese and European steelmakers.

* * *

Expansion plans by the U. K. motor industry, which may involve a total of about £150 million, are now taking shape.

Both **Ford** and **Standard-Triumph** have decided to establish major plants on the Merseyside, though unlike the Ford scheme, Standard's immediate plans provide only for body-making and body-assembly.

Ford is to build a £25 million integrated motor-car factory on the outskirts of Liverpool. This can be regarded as the "plum" of the projects so far announced and will produce about 200,000 cars a year.

British Motor Corp. is to transfer all its heavy vehicle and tractor production to Scotland. **Rootes Motors**, makers of Humber and Hillman cars, are also considering setting up a factory in Scotland, near Glasgow.

These developments can be construed as a success for the government's policy of steering industry into relatively depressed areas, Merseyside being the main beneficiary.

* * *

With the labor dispute on lines, stock market volume lines, the volume of business has dwindled and price movements have been narrow and irregular.

Labor troubles aside, markets appear to have reached an indecisive phase, following their prolonged advance, and buyers are waiting for a new incentive.

In itself, the rise from 4% to 5% in U. K. Bank Rate had only a modest effect, but prices were already off the top when the change was made.

The bond market has attracted a little more support and the opportunity has been taken to float a £12 million 5½% loan for Australia, at £99 for £100.

This was oversubscribed, but only to a moderate extent and initial dealings were on either side of the issue price.

So far, there has been no sign of any major downturn in business activity, though the pace of the recent advance seems likely to slacken in some trades.

Chancellor Heathcoat Amory has issued another warning about the need to keep costs down and to maintain the highest possible level of exports.

* * *

Re-grouping of Britain's aircraft industry is now almost completed. As expected, **Fairey** is selling its U. K. aviation activities to **Westland**, and will carry on as a holding company.

The sum involved in this deal is about £3.3 million and Westland will take over the development of the Fairey Rotodyne.

A £4 million contract for the Rotodyne has been signed on behalf of the government, which has approved the new link-up.

The offers made by Hawker Siddeley for the shares of de Havilland and Blackburn have now been declared unconditional. The necessary increase in Hawker's capital was approved by shareholders at a meeting in London.

Latest information is that Hawker's offers were accepted in respect of 78.8% of de Havilland's ordinary stock, 84.7% of the preference stock and 87.2% of the ordinary stock of Blackburn. Late acceptances will be received.

U. K. Stocks

(Supplied by Wisener, Mackellar & Co., Toronto)

	Recent Bid $	Ask $	Feb. 1 Bid $
Bowater Paper	9⅜	9⅞	9½
British Petroleum	7⅜	7¾	7¼
Courtaulds	8⅛	8⅛	8¼
Daily Mirror	1¾	2	1¾
Ford of England	13½	14	13⅞
Hawker Siddeley	4⅜	4¾	4⅛
Hudson's Bay Co.	27⅛	27⅝	27½
Imperial Chemical	7.60	7.90	7.50
Stewarts & Lloyds	7	7½	7

CNR Ordered To Increase Car Reflectors

OTTAWA (Staff) — Board of Transport Commissioners has ordered the **CNR** to enlarge its experimental program of putting reflective markings on boxcars to cut down accidents at level crossings.

The CNR, like the **CPR**, must put the markings on 3,000 boxcars, new or old, in 1960.

The CPR marked 3,000 cars last year, planned to do the same this year. The CNR marked only 696 cars in 1959, didn't plan to boost the number substantially in 1960.

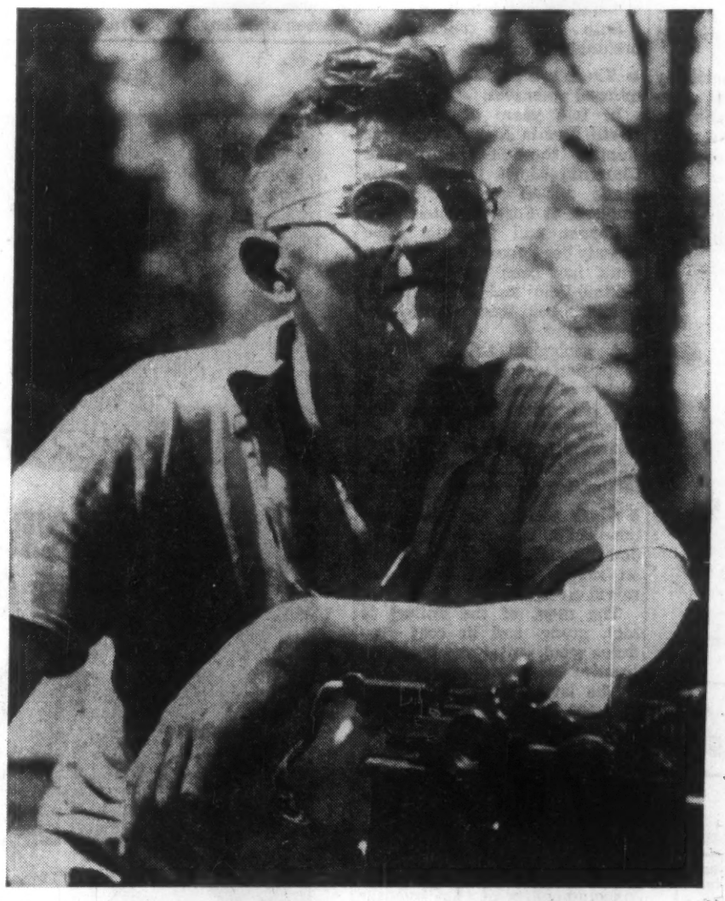
The marking program follows a board order of last May (**FP**, May 16). The new order amends the May directive.

The original order required each company to put reflective markings on all new boxcars between May, 1959, and the end of 1960; and on an equal number of old cars as they were overhauled. No number of cars to be marked was specified.

The commissioners issued the order on the assumption that each company buys about 1,500 new boxcars a year; and would buy about 3,000 between May, 1959, and the end of 1960.

On this assumption, the order would have resulted in about 12,000 marked cars, of about 124,000 owned by the two companies.

However, the CNR didn't buy as many cars last year as the board assumed it would, and so fell behind the board's target.



Maclean's *in action!*

Fresh from the Far East, Bruce Hutchison reports in the current Maclean's that except for Britain and the United States, ". . . I doubt that any free foreign nation will affect us more deeply than Japan . . ."

Behind the bronze smile of Buddha and the sing-song of the geishas this experienced reporter found a nation economically strong beyond imagination — no longer an exporter of ten-cent toys and cut-rate cotton, but a mature industrial complex dedicated to quality, value and fair trade practices.

Hutchison toured and talked. He met leaders of industry and politics. He dined with men of power who regard Canada as one of Japan's closest neighbors, an essential ally, a major market.

But he adds a stern warning. His article asks the question, "Can we keep the Japanese on our side?" In it are facts that Canada must grasp — and grasp soon.

Ahead-of-the-headlines reporting is what this article represents. Experienced reporting in depth is what Bruce Hutchison represents. How natural it is for Canadians to read this article in Maclean's. It is the kind of reporting they expect. And get. Issue after issue.

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At home or abroad, as new ideas grow . . . as new markets expand . . . as new peoples spring to life, Canadians turn to Maclean's for facts.

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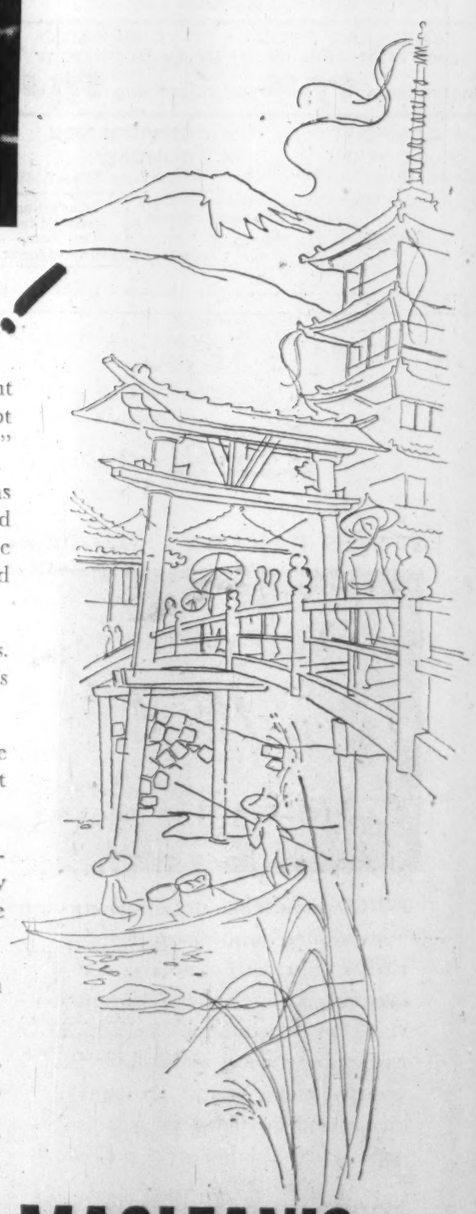

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ANNOUNCEMENT

PIGOTT BUICK VAUXHALL APPOINTMENT

ALEX McCORQUODALE

Mr. John E. German, Sales Manager of Pigott, Buick, Vauxhall, announces the appointment of Mr. Alex McCorquodale as Manager of their leasing department. Mr. McCorquodale has been connected with automotive leasing for the past 13 years.

NEW PR FIRM

Monty Berger, public relations manager of **Canadian Industries Ltd.**, has resigned from the company to establish his own public relations counselling firm, **Monty Berger & Co.**, at 1253 McGill College Ave., Montreal.

Barrenlands Not So Barren

Here's why this MLA wants Manitoba to grab a big chunk of the Northwest Territories . . .

From Our Own Correspondent

WINNIPEG — Conservative MLA John E. Ingebrightson, of Churchill, a mild-spoken man of Norwegian descent, insists that Manitoba should be twice as big as it is.

Ingebrightson has introduced a resolution in the legislature asking help to get the government of Canada to transfer to Manitoba the mainland part of the District of Keewatin, including Boothia and Melville peninsulas.

It would double the province's land area, by adding 218,460 sq. mi., and increase by one quarter the freshwater area, by adding 9,700 sq. mi.

The territory he wants to annex runs west from Hudson Bay along the 60th parallel to the Saskatchewan border, thence north through a series of straits to the Gulf of Boothia.

Following its coastline east and south it comes to Pelly and Committee Bays, Fury and Hecla Straits, Roes Welcome Sound, and thence along the west shore of Hudson Bay south to the 60th parallel.

Keewatin District is in two parts, the Interior Uplands and the Coastal Plain.

The first includes territory above the highest ancient shore line of either Hudson Bay or the Arctic Ocean with a mean elevation from 900 ft. to 1,000 ft.

The Coastal Plain is between the highest ancient postglacial seabeach and the present shore, sloping gradually from 500 ft. to sea level.

Knowing the north country, Ingebrightson disagrees with Northern Canada maps that designate the territory as Barrenlands.

A land that can support thousands of caribou and musk ox shouldn't be hampered by a forbidding name.

More properly it should be called Arctic Prairie.

The prairie, he explained, starts at Churchill where it is 50 mi. wide. Going north it is 125 mi. wide at the north end of Dubawnt Lake and reaches a maximum width of more than 300 mi. north of Chesterfield Inlet.

Far from being a fantastic idea, he said, few realized the immense potential resources of the territory and Manitoba would be missing a big chance if it didn't grab it.

His reasons:

- **There are 800 mi. of coastline** where the salmon run is a week to 10 days longer than on the British Columbia coast.

The beluga and white whale is found in great numbers.

Both could be the basis of profitable industries.

- **There are probably valuable mineral resources.**

In two years of operation, **North Rankin Nickel Mines** has shipped through the port of Churchill 65,000 tons of high-grade nickel concentrate to smelters at Fort Saskatchewan.

Copper and platinum have already been found. Exploration work has been done west of Eskimo Point and, if reports are reliable, gold and silver have been found.

A geological survey of the south portion of Keewatin District was made by C. S. Lord in 1953, when 57,000 sq. mi. were mapped.

According to his report 14,000 sq. mi. warranted search for radioactive deposits.

- **Musk ox**, the only beef-on-the-hoof in the Arctic, could be domesticated and made to run on ranges as beef cattle are raised on ranches.

The meat of the animal is high grade, and its coat produces wool, softer and more attractive than cashmere.

The large animal weighs up to 1,400 lb. Hides are often 15 ft. from nose to rump.

- **A number of lakes** have great potential for commercial fishing, among them Nueltin, Ennadai, Dubawnt, North and South Henik, Kaminuriak and Baker lakes.

Lake trout up to 25 lb. aren't uncommon, whitefish average from 6 lb. to 10 lb. and tullabee 5 lb.

- **Some of the principal rivers**, Thelon, Dubawnt, Maguse and Big River have considerable power potential.

The largest and most important in this respect is the 455-mi.-long Kazan emptying into Baker Lake.

- **The muskeg area** has vast resources of fuel peat and peat moss, both of which could be utilized.
- **Timber stands** along the Thelon River are of considerable value. The wooded area extends for 170 mi. below forks of the Hanbury River. Trees are up to 15 in. in diameter, the average size 6 in.

Outlet to markets: Through Baker Lake and Chesterfield Inlet.

- **The area is rich in fur resources.**
- **Nuclear submarine freighters**, if the time comes for their commercial use, could operate under the Arctic ice and might make possible the operation of bulk carriers of ore, oil and grain.

A technical design investigation and a series of economic studies by **Mitchell Engineering Ltd.**, London, Eng., has already indicated this form of traffic might be feasible.

It would probably develop the port of Churchill.

Churchill might become an important administrative and trade centre with a population of 50,000 before the turn of the century.

- **And Manitoba would become a maritime province**, with 800 mi. of navigable coastline with important water routes into the interior, such as Wager, Chesterfield and Rankin inlets.

Chesterfield Inlet is more than 100 mi. long and coastal ships of considerable tonnage can navigate to Baker Lake.

Pulp Mill Putting New Pep Into Canso's 'Ghost Town'

From Our Own Correspondent

PORT HAWKESBURY, N. S. — Five years ago when the Canso causeway linked Cape Breton with the Nova Scotia mainland, it was thought Port Hawkesbury would become a ghost town.

Many townspeople had depended on the Canso ferry for their livelihood.

Today they face the future with renewed confidence, reflecting developments in the wake of **Nova Scotia Pulp Ltd.'s** $40 million project on the Cape Breton side of the strait.

Here's what is happening:

- **Eight firms** are considering erection of plants in the town of 1,100.
- **Toronto interests** have expressed interest in a $500,000 shopping centre development.
- **Plans are under way** for establishment of Nova Scotia's first metropolitan planning board to co-ordinate projects.

Construction of the pulp mill is expected to start March 1. Ten buildings, including the main structure, administration building and boiler house; installation of machinery, and construction of a pipeline to carry water from the mainland are provided in an initial $13 million contract, awarded to **Cape-Tidewater Ltd.**

Nova Scotia's largest ready-mix concrete plant will be set up to provide concrete for the province. It will be operated by **Tidewater Construction Co.** of New Glasgow.

Meanwhile land values in the Port Hawkesbury area are soaring amid speculation that the population will quadruple by the time the mill goes into operation in 1962.

Some fear inflated real estate prices will drive ancillary industries and prospective residents away.

But town officials have hinted they will use rights of expropriation to acquire tracts for development if owners demand unrealistic prices.

U. S. Firm Buys Terry Machinery

MONTREAL (Staff) — **Terry Machinery Co.**, Montreal has been acquired by **Textron Inc.** of the U. S. The deal was for cash, amount undisclosed.

There is no public investment interest in Terry, whose annual sales have been reported to be in the $6 million-$8 million range.

W. H. Terry, company's founder in 1938, will continue as president.

Terry's main plant is in Montreal.

Subsidiaries operate from British Columbia, Alberta, Ontario, Quebec, New Brunswick and Nova Scotia.

Company makes and sells pumps, generators, electronic systems, chain saws, also does contract work for the federal government.

Textron is a one-time textile company which in recent years has diversified extensively into metal products as well as supplying the auto and aircraft industries.

It still has textile interests.

ARE YOU READY...

FOR THE BUSY PRODUCTION SCHEDULE AHEAD?

Progressive executives in business and industry have found that it pays to take a close look at their plant and distribution facilities, including machinery, during the usually slower winter months. Costly "downtime" in spring and summer schedules can be avoided by doing plant extension, maintenance work, and machinery repairs during the winter months when men and materials are so readily available. Jobs of redecoration and renovation get more careful attention, often are done more economically.

Winter is also a good time to do the following:

- Undertake winter sales promotion programs tied in with the "Do It Now" Winter Work Campaign
- Produce and stockpile standard products for spring markets
- Investigate new applications for existing products and the manufacture of products suitable for spring markets
- Train and retrain personnel
- Arrange winter vacations and transfer of staff from slack to busy departments

Canada Winter Work Campaign — JAN FEB MAR

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FOUNDATION OF CANADA ENGINEERING CORPORATION LIMITED

VANCOUVER TORONTO MONTREAL

(Atkin's Flowers Limited—Leamington, Ontario.)

Mr. E. J. Atkin, President
Atkin's Flowers Limited—
largest flower propagators
in Canada—
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"We found no apparent efficiency difference between Coal and Gas as a fuel."

GAS COST 90% MORE THAN COAL

Now has installed Automatic Coal Stoker equipment to replace gas for heating all greenhouses

A 6-month fuel trial conducted by this owner showed
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(2) . . . since we require a full-time watchman-fireman (for either gas or coal) labour cost savings were incidental.
We strongly recommend that anyone wishing to know the economics of various fuels should contact the Engineers of the B.C.I." say Don and Jack Atkin, Vice-Presidents of Atkin's Flowers Limited.
If you are building a new plant—or up-dating an older one—
The Bituminous Coal Institute can help avoid costly mistakes and is always available as a source of proper engineering information on fuel economics.

For further information or additional case histories showing how other plants have saved money burning coal the modern way, write to Bituminous Coal Institute of Canada at 32 Front Street West, Toronto.

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If you're looking for a job, or striving to improve your present position, your local National Employment Office is ready to help you *now.* This NES service is free.

Use your local National Employment Office—it's there to help you and your community.

UNEMPLOYMENT INSURANCE COMMISSION — NATIONAL EMPLOYMENT OFFICE

NATIONAL EMPLOYMENT SERVICE
of the
UNEMPLOYMENT INSURANCE COMMISSION

9004

Okay $5½ Million For Public Works

Contracts totaling $5.7 million in value were awarded by the federal Department of Public Works during January, 1960.

Amount for new works in building construction and harbors and rivers engineering was $5,208,390; for repairs and maintenance of existing structures, $345,045; and for construction of highways, $112,182.

Among the major projects for which contracts were awarded during the month were:

Newfoundland

St. John's—Removal of part of the sunken vessel Desola—**Foundation Co. of Canada Ltd.,** Toronto $256,700.00

St. John's—Improvements to harbor — **McNamara Construction of Newfoundland Ltd.,** St. John's $3,802,374.00

Nova Scotia

Dartmouth—Construction of access road, security fence, watermain at the oceanographic and hydrographic research station—**Trynor Construction Co.,** Halifax $112,182.50

Little Tancook—Reconstruction of breakwater—**T. C. Gorman (Nova Scotia) Ltd.,** Halifax ... $182,364.00

Sydney—Installation of new passenger elevator and alterations to second floor of federal building — **Maritime Builders Ltd.,** Sydney $29,900.00

Quebec

Ayer's Cliff—Construction of post office building—**Couillard Construction Ltd.,** Coaticook, Que.. $15,837.40

Le Bic—Construction of post office building—**Mr. Paul Malenfant,** Trois Pistoles, Que. $13,457.00

Ste. Felicite—Construction of post office building—**Les Entreprises St. Germain Ltée.,** Rimouski, Que. $16,500.00

Ontario

Bayfield—Construction of retaining wall and dredging — **Ontario Marine & Dredging Ltd.,** Toronto $70,168.87

Guelph—Construction of insecticide building and garage for the Department of Agriculture—**Dunker Construction Ltd.,** Kitchener, Ont. $66,000.00

Kapuskasing — Construction of header house at experimental farm for the Department of Agriculture—**Messrs. Denis & Robert Charbonneau,** Hearst, Ont. $41,900.00

Ottawa—Construction of partitions, etc at finance building, Tunney's Pasture — **Leopold Beaudoin Construction Ltd.,** Ottawa $126,333.00

Ottawa—Construction of electronic data processing centre at Dominion Bureau of Statistics, Tunney's Pasture — **Ron Construction Co.,** Ottawa $146,823.00

Manitoba

Winnipeg—Supply and installation of mail handling equipment (Conveyor No. 43) at general post office —**G. W. Sadler Co.,** Montreal $6,448.00

Saskatchewan

Carnduff—Construction of detachment quarters for RCMP—**Freoschal & Heisler Ltd.,** Moose Jaw, Sask. $48,661.50

Neilburg—Construction of post office building—**C. M. Miners Construction Co.,** North Battleford, Sask. $22,891.00

Vanguard—Construction of post office building—**Swift Construction Co.,** Swift Current, Sask. . $21,925.38

Alberta

Mannville—Construction of post office building—**New West Construction Co.,** Edmonton .. $19,914.00

British Columbia

Kamloops—Construction of administration building and garage for RCMP—**Marpole Construction Co.,** Vancouver $433,289.00

Vancouver—Construction of wharf and floats—**Quadra Construction Co.,** Vancouver $113,474.00

Northwest Territories

Hay River, N.W.T.—Construction of two-apartment teacherage for Department of Northern Affairs and National Resources—**St. Laurent Construction Ltd.,** Edmonton $35,226.00

Our High-Priced Lumber In Two-Flank Sales Fight

MONTREAL (Staff) — Canada's $700-million lumber industry faces two major problems:

- **Loss** of some overseas export markets.
- **Declining** per capita consumption in the domestic market.

While export trade in 1959 was well above 1958, it reflected a disturbing pattern, according to president H. F. Staniforth of the Canadian Lumbermen's Association.

"More and more lumber is being sold in U. S. markets while less is going to the U. K. and other former customers. In other words, we are pricing ourselves out of some of these export markets," he told 1,500 delegates to the association's 52nd annual convention in Montreal.

Main reason: High labor cost content of Canadian products.

Staniforth said: "If present trends continue, the only customers who will be able to afford our products will be our U. S. neighbors and ourselves."

One suggestion: Development of wider markets for lumber products.

What about marketing more logs as pulpwood, poles or veneer? What about an expansion of debarking and chipping mill operations?

Delegates were told such marketing might yield better returns.

The decrease in per capita consumption of lumber is particularly noticeable in house construction, owing to growing competition from a widening variety of substitute products.

Per capita use has declined 18%, from 257 fbm to 210 fbm, in the last 10 years.

Lumber used in the average house has dropped from 18,900 bd. ft. in 1920 to around 10,500 bd. ft. today.

"Unless the lumber industry adopts effective measures to combat this situation, there is no reason for believing that the downward trend will be arrested," J. H. Jenkins, chief, Forest Products Laboratories of Canada, told a panel.

Home construction is the largest market for lumber and the industry is worried by the prospect of fewer housing starts this year. Operators were urged to keep a close watch on utilization trends and gear production to meet demand.

Meanwhile the Canadian Wood Development Council, formed a year ago to represent manufacturing and wholesale lumber associations, plans to:

- **Promote** use of lumber and wood products through a nationwide publicity campaign.
- **Expand markets** through representation on building code and specification committees.
- **Develop better appreciation** of uses of wood by maintaining contact with consumer groups.

Mandatory grade marking of all boards and dimension lumber used in construction of FHA housing in U. S. becomes effective April 1. Canadian lumber will be graded for export to the satisfaction of FHA.

While grade marking is not compulsory in Canada, its introduction will not be long delayed at least by Central Mortgage & Housing Corp., Staniforth said.

The feeling among lumbermen: Grading will do much to protect the reputation of the product.

Imperial Inv. Net Up 33%

Net profit of **Imperial Investment Corp.** in six months ended Dec. 31, 1959 (first half of current fiscal year) was $610,810, up 33% from $458,089 in like 1958 period.

Earnings were equal to 60c per share (44c year before).

Total notes receivable of the finance company rose 36% to $75.2 million during 1959.

Funds received by company from a recent rights offering (FP, Jan. 9) will provide the base for further borrowings in the months ahead, P. P. Saunders, president, says.

Over 98% of the maximum number of shares were subscribed for under the basic subscription right and the balance of class A shares available were taken up under the additional subscription privilege.

6 Mos. Ended Dec. 31:	1959	1958
	$	$
Income earned	4,384,504	3,254,520
Less. Oper. chgs. & cost of borrowings	3,391,272	2,400,502
Income taxes	350,887	369,349
Min. sh'holders int.	31,535	26,580
Net profit	610,810	458,089
Net per share	60c	44c

HB Oil & Gas Income Rises

Hudson's Bay Oil & Gas Co. and its subsidiaries had a net operating income of $2,821,000, equal to 16c a share, for 1959.

This compares with $1,316,000, or 7c a share, in 1958.

The improvement in earnings resulted primarily from increased natural gas sales and reduced dry hole costs. Special credits, primarily from sales of properties, raised total net income for 1959 to $3,764,000.

Company's net crude oil production averaged 21,144 bbl. daily—an increase of 1,045 b/d or 5.2% over 1958.

Sales of natural gas for 1959 averaged 47.9 million cu. ft. daily compared with 14.4 million cu. ft. daily for prior year.

Company's natural gas sales will more than double during the next few years, if pending export permits are approved and natural gas pipelines are built to large U. S. market outlets.

During the year Hudson's Bay Oil & Gas participated in 11 discoveries and one field extension.

The exploration was highlighted by a significant extension to the Virginia Hills oilfield in north central Alberta, an encouraging crude oil discovery in the Milligan Creek region of northeastern B. C., and acquisition of large, undeveloped acreage holdings in the Northwest Territories. Early this year an exploratory well drilled near Fort Nelson in northeastern B. C. encountered 359 ft. of gas-bearing reef. This is the thickest producing reef section found in the area to date.

Swift Canadian Earnings Better

Canadian operations of **Swift & Co.,** Chicago, Ill., returned substantially better earnings in fiscal year ended Oct. 31, 1959, the annual report says.

Consolidated net income of the U. S. firm amounted to $19.1 million ($10 million year before), equal to $3.20 ($1.70) per share.

Expansion by **Swift Canadian Co.** included new poultry processing plants at Edmonton, Alta.; turkey poult hatcheries at Jasper and Wynyard, Sask.; and a new meat sales unit at Ottawa, Ont.

Four other Canadian plants were completely modernized.

MADE IN CANADA

Canada Crane & Hoist Co., Toronto, is now manufacturing the Beacon line of hydraulic lift tables, previously imported from the U. S. Two styles with capacities ranging from one to 10 tons are available.

HOUSING MEET

National House Builders Association will hold an international housing conference at its annual convention - exhibition at the Queen Elizabeth Hotel, Montreal, Jan. 16-20, 1961. Representatives from at least six foreign countries may attend.

FAMOUS PLAYERS
CANADIAN CORPORATION
LIMITED

NOTICE OF DIVIDEND No. 104

NOTICE is hereby given that a dividend of Thirty-seven and One-half Cents (37½c) per share has been declared for the quarter ending March 31st, 1960, on all issued common shares of the Company, payable on March 11th, 1960, to shareholders of record at the close of business on February 24th, 1960.

By Order of the Board.

A. MacCUNN,
Secretary.

Toronto, February 15th, 1960.

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to be dated	To mature
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A sinking fund will be provided for the debentures commencing in 1965 requiring payments of $80,000.00 in each of the years 1965 to 1979 inclusive, which should retire the debentures by maturity.

Trustee ..... The Montreal Trust Company
Transfer Agent and Registrar . The Montreal Trust Company

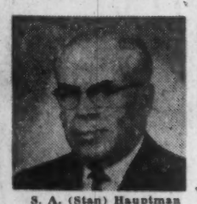
We as brokers offer these debentures subject to the prior sale or withdrawal by the company, and subject to the approval of all legal details by Messrs. Clement Parlee Whittaker Irving Mustard & Rodney, who are solicitors for both ourselves and the company.

Price: 100 plus accrued interest if any.

Subscriptions will be received subject to allotment or rejection and subject to the requirements of the minimum subscription. The right to close the subscription books at any time without notice is reserved.

It is expected that debentures and share certificates in definitive form will be available for delivery on or about March 1st, 1960.

A Prospectus will be furnished promptly upon request.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Whatever your financial requirements in Nassau or elsewhere in the Caribbean area – financing, trusts, estates, exchange control or transfer of funds – your local B of M office can provide you with valuable assistance.

We can help you, too, in establishing reliable import-export connections with reputable firms, or in supplying up-to-date information on markets, sources of supply, or any other aspect of doing business in the Bahamas, The West Indies or Latin America.

Your enquiries through any one of our 800 branches across Canada or through our International Department at our Head Office in Montreal will receive prompt, helpful attention.

BOLAM was formed in October, 1958, with an authorized capital of £7,000,000 and is jointly owned by the Bank of Montreal and the Bank of London & South America Limited. Today, BOLAM serves the Bahamas, The West Indies and Latin America through 20 strategically situated offices.

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3F-4705

ANNOUNCEMENT

EDMOND B. HYMMEN

The appointment of E. B. Hymmen as Chief Engineer of Stone & Webster Canada Limited has been announced by L. L. Youell, Vice-President and General Manager. Mr. Hymmen graduated from the University of Toronto in Mechanical Engineering in 1932 and received his Master's degree in 1933. Prior to joining Stone & Webster Canada Limited as Mechanical Engineer in 1957 he was Chief Engineer with a leading Canadian manufacturer of steam generating equipment.

Mr. Hymmen is a member of the Association of Professional Engineers of Ontario, and the American Society of Mechanical Engineers.

Company Reports

Building Materials

SCHELL INDUSTRIES LTD., Woodstock, Ont., net profit of $14,661 for year ended Oct. 31, 1959, was 81.2% higher than previous year's $8,091.

Sales increased 7.5% to $1.9 million. Profits represented less than 0.75% of sales.

Losses in the precast division were attributed to insufficient continuous volume and by weather difficulties.

Capital expenditures totaled $57,000. To improve efficiency, capital expenditures will continue to be extensive.

Some non-profitable manufacturing departments have been eliminated and the company is selling some products not being produced at the plant.

President R. G. Thomson reports that earnings should be improved next year.

CONS. INCOME ACCOUNT

Years Ended Oct. 31:	1959	1958
Net earnings	$122,168	$118,511
Less: Deprec.	88,097	89,161
Bond int.	17,710	18,977
Inc. tax	1,700	2,282
Net profit	14,661	8,091
Less: Pref. divds.	975	1,000
Surplus for year	13,686	7,091
Times Bond Interest Earned:		
Before deprec.	6.90	6.24
After depr.	1.92	1.55
Earnings per Share and Dividend Record:		
Preferred	$104.72	$40.46
Paid	5.00	5.00
Common	0.23	0.12
None paid.		
Shares o/s as at Oct. 31:		
Pref., $100 par	140	200
Common, n.p.v.	60,000	60,000

CONDENSED BALANCE SHEET

As at Oct. 31:	1959	1958
Cash	$28,112	$18,385
Accts., etc., rec.	402,074	333,432
Inventories	220,161	363,325
Prepaid exp.	13,769	13,637
Total curr. assets	664,116	729,279
Unamort. bd. disc.	25,067	28,202
Fixed assets*	525,673	556,448
Total assets	1,214,856	1,313,929
Bank loan	175,000	225,000
Accts., etc., pay.	250,792	280,636
Total curr. liab.	425,792	505,636
Funded debt	300,000	324,000
Capital stock	268,620	274,620
Earned surplus	220,444	209,673
*After depr. of	755,583	692,510
Working capital	238,324	223,643

EDMONTON CONCRETE BLOCK CO., Edmonton, net profit of $107,532 for year ended March 31, 1959, was 16.7% lower than previous year's $129,043.

Sales decreased slightly reflecting the highly competitive market conditions.

Autoclaving facilities, for high pressure steam curing of concrete products were put in full operation and improved the quality of the company's products.

Production facilities for the Spectra-Glaze division were expanded and products marketed in Saskatchewan as well as throughout Alberta.

Majority interest was acquired in **Wye Road Sand & Gravel Ltd.,** to enable the company to control more of its raw materials.

President C. C. Cousins said costs continued to rise despite efforts to hold them down.

INCOME ACCOUNT

Years Ended Mar. 31:	1959	1958
Net oper. inc.	$311,208	$325,782
Add: Gain, sale f.a.	4,138	6,113
Net earnings	315,346	331,895
Less: Deprec.	109,503	83,285
Interest charges	22,734	16,911
Bond disc. & exp.	1,948	1,948
Income taxes	73,629	100,708
Net profit	107,532	129,043
Less: Divds.	55,200	55,200
Surplus for year	52,332	73,843
Earnings per Share and Dividend Record:		
Common	$0.47	$0.56
Paid	0.24	0.24
Shares o/s at Mar. 31:		
Common, n.p.v.	230,000	230,000

CONDENSED BALANCE SHEET

As at Mar. 31:	1959	1958
Cash	$250	$250
Investments	.....	50,314
Accts., etc., rec.	156,050	84,248
Inventories	211,696	220,197
Prepaid exp.	7,256	14,542
Total curr. assets	375,252	369,551
Misc. assets	14,502	13,924
Deferred charges	21,781	23,987
Inv., adv., subs.	30,000	.....
Fixed assets*	340,677	675,980
Total assets	1,282,212	1,086,442
Due bank	171,725	2,897
Accts., etc., pay.	128,579	139,861
Total curr. liab.	300,304	142,758
Sale agree. pay.	23,591	35,000
Notes payable	58,713	55,413
Funded debt	193,500	199,500
Capital stock	161,407	161,407
Capital surplus	11,822	11,822
Earned surplus	532,875	480,542
*After depr. of	421,156	314,398
Working capital	74,948	226,793

Contingent liability—As as Mar. 31, 1959, guarantee on bank loans of subsid. of $10,000.

CANADA CEMENT CO., Montreal, consolidated net profit of $7,011,305 for year ended Nov. 30, 1959 was 2.8% lower than previous year's $7,215,183.

Company acquired substantial interest in several distributing companies at a total cost of $12,185,670.

Capital expenditures totaled $2,603,148 for new plant and equipment. Forecast for 1959-60 fiscal year is $2,750,000.

Construction volume for 1960 is estimated to be slightly higher than 1959. If estimates are correct, company's plants should be able to operate at efficient rates.

CONSOL. INCOME ACCOUNT

Years Ended Nov. 30:	1959	1958
	$	$
Oper. inc.	21,529,854	21,600,695
Add: Prof. sale assets	307,000	.....
Net earnings	21,836,854	21,600,695
Less: Deprec.	6,281,898	6,339,301
Debent. interest	1,513,651	1,640,211
Income tax res.	7,030,000	6,406,000
Net profit	7,011,305	7,215,183
Less: Pref. divd.	910,000	974,366
Com. divd.	2,400,000	2,400,000
Surp. for period	3,701,305	3,840,817
Times Debenture Interest Earned:		
Before deprec.	14.43	13.17
After deprec.	10.23	9.30
Earnings per Share and Dividend Record:		
Preferred	$10.02	$10.31
Paid	1.30	1.30
Common	2.54	2.60
Paid	1.00	1.00
Shares o/s as at Nov. 30:		
Pref., $20 par	700,000	700,000
Common, n.p.v.	2,400,000	2,400,000

CONDENSED CONS. BALANCE SHEET

As at Nov. 30:	1959	1958
Cash & govt. bds.	$2,456,651	$7,260,643
Accts. rec. less res.	5,010,735	4,278,297
Inventories	12,630,179	12,767,637
Prepaid exps.	436,406	431,197
Tot. curr. assets	20,533,971	24,737,774
Pref. divd. maint. fund*	1,820,000	1,820,000
Invest., assoc. cos.	12,185,670	.....
Deb. disc. unamort.	232,000	268,750
Fixed assets†	70,367,450	74,046,200
Total assets	105,139,091	100,872,724
Accts., etc., pay.	5,000,659	4,264,175
Taxes pay.	4,224,132	3,463,554
Total curr. liab.	9,224,791	7,727,729
Funded debt	32,750,000	33,625,000
Reserves	2,938,000	2,995,000
Capital stock	20,403,905	20,403,905
Capital surplus	6,086,900	6,086,900
Earned surplus	31,915,495	28,214,190
Pref. divd. fund	1,820,000	1,820,000
†After depr. of	70,828,042	64,732,674
*Mkt. value	1,774,298	1,822,775
Working capital	11,309,180	17,010,045

DOMINION OILCLOTH & LINOLEUM CO., Montreal, consolidated net profit of $2,162,712 for year ended Oct. 31, 1959 was 5.5% higher than previous year's $2,049,797.

Sales reached a record high. President K. B. Roberton reports that the tight mortgage situation resulted in slackening-off of business in latter part of the year.

Capital expenditures totaled $980,316 and included modernization of coating cell at **Congoleum Canada Ltd.** and increasing curing capacity at **Barry & Staines Linoleum (Canada) Ltd.**

Canadian dollar premium has greatly reduced company's tariff protection. Exports increased slightly.

CONSOL. INCOME ACCOUNT

Years Ended Oct. 31:	1959	1958
Net earnings	$4,742,686	$4,358,380
Less: Deprec.	687,309	624,188
income taxes	1,863,957	1,655,409
Min. interest	28,708	28,986
Net profit	2,162,712	2,049,797
Less: Com. divds.	1,672,000	1,596,000
Surplus for year	490,712	453,797
Earnings per Share and Dividend Record:		
Common	$2.85	$2.70
Paid	2.00+0.20	2.00+0.10
Shares o/s at Oct. 31:		
Common, n.p.v.	760,000	760,000

CONDENSED CONS. BALANCE SHEET

As at Oct. 31:	1959	1958
Cash	$182,027	$465,967
Accts. rec.	3,277,419	3,866,492
Inventories	6,350,581	4,740,345
Total curr. assets	9,810,027	9,072,804
Subs., etc., invests.	874,995	838,494
Other invests.a	6,373,449	6,475,796
Misc. assets	178,064	92,046
Fixed assets*	8,654,069	6,413,510
Total assets	25,890,604	22,892,650
Total curr. liab.	2,563,180	2,090,080
Insurance reserve	1,000,000	1,000,000
Minority int.	134,351	129,643
Capital stock	6,400,000	6,400,000
Capital surplus	3,757,386	3,727,952
Earned surplus	10,035,687	9,544,975
*After depr of	11,440,043	10,920,077
aAppr. mkt. val.	8,204,352	8,467,832
Working capital	7,246,847	6,982,724

Financial

CHARTERED TRUST CO., Toronto, net profit of $366,678 for 1959 was 8% higher than previous year's $339,161.

President H. E. Langford reports that company had a record year in 1959. All branches and departments contributed to the satisfactory results.

Quarterly dividends have been increased to 50c per share commencing with declaration payable April 1, 1960.

	1959	1958
Liabs. to pub., etc.*	$36,911,002	$31,067,631
Sh'holders' equity	4,319,684	4,097,006
*Secured by:		
Mortgages	16,905,154	11,856,533
Office premises	597,235	515,780
Liquid assets‡	23,728,297	22,792,324
Total	41,230,686	35,164,637
‡Includes bonds and stocks.		
Estates account	126,614,533	111,875,500
Net profit	366,678	a339,161
Earned per Share	$4.07	$3.77
Paid	1.60	1.45

aTax provision reduced by $49,000 being special allowance granted in 1958 on employees' past service pension cost.

CANADA PERMANENT TRUST CO., Toronto, net profit of $234,234 for 1959 was 3.4% higher than 1958's $226,538.

Assets under administration at Dec. 31, 1959 were a record $177.5 million, up 10.6%.

Corporation transferred $250,000 from undivided profits to reserve fund which now stands at $1,250,000.

	1959	1958
	$	$
Liabs. to pub., etc.*	277,175	222,975
Sh'holders' equity	3,510,574	3,436,340
*Secured by:		
Mtges.	931,520	995,570
Liquid assets‡	2,856,229	2,663,745
Total	3,787,749	3,659,315
‡Includes stocks and bonds.		
Estates account	173,705,619	156,888,116
Net profit	234,234	226,538
Earned per Share	$11.71	$11.33
Paid	8.00	7.50

HURON & ERIE MORTGAGE CO., London, Ont., net profit of $890,177 for 1959 was 9% higher than 1958's $816,717.

Deposits on Dec. 31, 1959 were $41.9 million ($42.3 million a year earlier). Drop was largely due to higher available interest return. Number of savings deposit customers increased 12%.

New offices were opened in Sarnia and New Westminster. A long term lease has been taken on premises in Montreal and operations there will be greatly expanded.

A site for a new branch office building was purchased in Toronto at St. Clair and Yonge Sts. The new office building in St. Catharines was opened early in 1960.

	1959	1958
	$	$
Liabs. to pub., etc.*	122,350,055	102,357,641
Shareholders' equity	11,458,694	11,108,517
*Secured by:		
Mtges. & sls. agree.	100,898,286	88,052,431
Office premises	4,090,498	3,886,842
Liquid assets‡	28,849,965	21,526,885
Total	133,808,749	113,466,158
‡Includes bonds and stocks of which $5,199,526 in 1959, and $5,194,444 in 1958 were Canada Trust stock.		
Net profit	$890,177	$816,717
Earned per Share	$2.97	$2.72
Paid	1.80	1.60

TIMED INVESTMENT FUND LTD., Toronto, net profit of $82,850 for year ended Sept. 30, 1959 was 17.9% higher than previous year's $70,281.

Outstanding shares increased from 310,201 to 326,040 and by Dec. 31, 1959, approximately 340,000 shares were outstanding.

Common stocks in the portfolio have been reduced from 80% to 48% of net assets. This does not include common stock of **Bell Telephone** which the company considers in the preferred category.

President Joseph dePencier points out that fund's timing formula suggests that lower common prices should be reached before the fund repurchases common stocks.

INCOME ACCOUNT

Years Ended Sept. 30:	1959	1958
Total income	$85,050	$72,371
Net profit	82,850	70,281
Less: Divds. paid	77,450	69,081
Surplus for year	5,400	1,200
Earnings per Share*	$0.26	$0.22
Paid	0.24	0.22

*Based on number of shares outstanding as calculated from dividends paid.

Shares o/s as at Sept. 30:		
Special, $1 par	326,040	310,201
Ordinary, $1 par	755	755

CONDENSED BALANCE SHEET

As at Sept. 30:	1959	1958
Cash	$65,165	$2,518
Accts. rec., accr. int. & divds.	17,481	11,207
Invests. at cost†	1,619,719	1,474,304
Organ. exps., less w/o	755	755
Total assets	1,703,120	1,488,784
Accts., etc., pay.	5,240	10,470
Capital stock	326,795	310,956
Capital surplus	1,361,835	1,163,508
Earned surplus	9,250	3,850
†Market value	1,710,063	1,644,263
Net assets per sh.	5.47	5.30

MONTREAL TRUST CO., Montreal, net profit of $1,122,993 for 1959 was 11.2% higher than previous year's $1,009,598.

Capital and guaranteed trust accounts increased by $20,858,244 to $111,480,342.

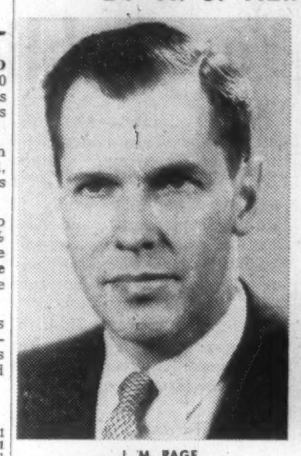
Quarterly dividends have been increased to 35c per share from 30c, commencing with dividend payable April 15, 1960. An extra dividend of 30c per share will be paid at the same time in respect of 1959 earnings.

Annual meeting is Feb. 24.

	1959	1958
	$	$
Liabs. to pub., etc.†	100,165,081	79,745,108
Shareholders' equity	11,315,281	10,876,990
†Secured by:		
Mortgages	23,759,749	21,964,948
Office premises	1,151,979	638,391
Liquid assets‡	86,568,614	67,998,761
Total	111,480,342	90,622,098
‡Includes stocks and bonds.		
Net profit	1,122,993	1,009,598
Earned per Share	$2.78	$2.53
Paid	1.20+0.20	1.20+0.20

ANNOUNCEMENT

FINANCIAL DIVISION CHANGES ANNOUNCED BY H. J. HEINZ COMPANY OF CANADA LTD.



J. M. PAGE

C. C. BAILEY

R. G. NELLES

Mr. F. T. Sherk, President of the H. J. Heinz Company of Canada Ltd., announces the appointment of Mr. J. M. Page to the position of Vice-President — Finance. Former Secretary and Comptroller, Mr. Page will continue his position as Secretary and a member of the Company's Executive Committee.

Mr. Page joined the Heinz Company in May 1945 as Manager — General Accounting and remained in that position until March 1949 when he was named Assistant Comptroller. In August 1955, Mr. Page was appointed Comptroller and Secretary of the Company, and elected to the Board of Directors in August 1956.

Mr. C. C. Bailey, Export Manager, was appointed Assistant Secretary of the Company in addition to his present responsibilities. Mr. Bailey joined the Company in November 1926 in the Traffic Department and two years later was transferred to Foreign Sales. In May 1940 he became Head of the Export Department.

J. M. Page, Vice-President — Finance, announces the appointment of Mr. R. G. Nelles as Comptroller of the Company. Former Assistant Comptroller, Mr. Nelles joined the Company in July 1946 in the General Accounting Department, Head Office. In November of the same year he was appointed Department Head — Factory Cost & Payroll, and held that position until June 1949 when he became Manager — General Accounting. In December 1952 he was appointed Manager — Budgets and Procedures and in 1957 named Assistant Comptroller.

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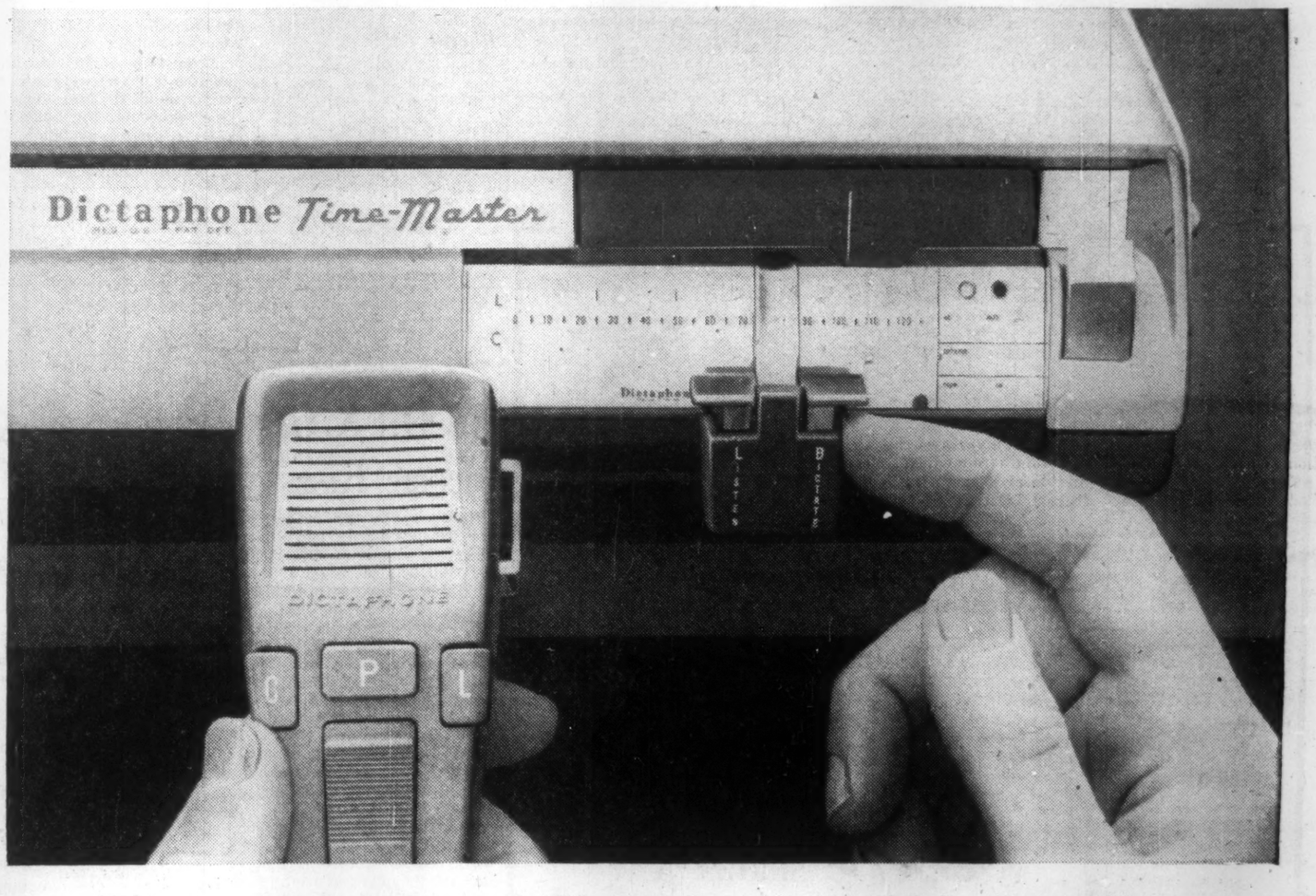
ANNOUNCEMENT

CANADA CEMENT COMPANY APPOINTMENTS

V. C. HAMILTON

R. S. AIKEN

Following a recent meeting of the Board of Directors of the Canada Cement Company, Limited, Mr. J. M. Breen, President and General Manager, announced the appointments of Mr. V. C. Hamilton as Vice-President and Assistant General Manager, and Mr. R. S. Aiken as Vice-President and Treasurer. Mr. V. C. Hamilton is also a Director of the Company.



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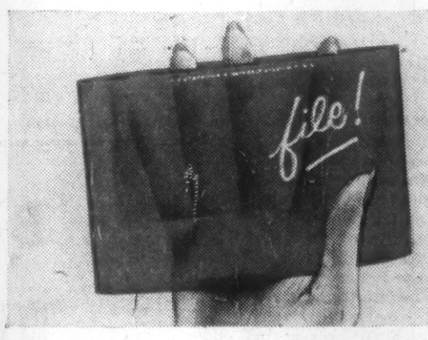

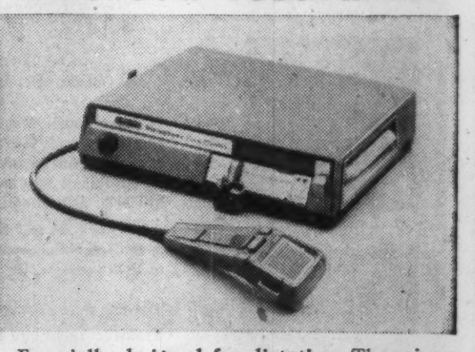

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Find Formula To Pay Grants

Fleming and Barrette in accord on paying grants to Quebec universities . . .

OTTAWA (Staff)—A broad-ranging solution to the eight-year dispute about the Quebec university grants is at last in sight.

The "accord" reached this week by Premier Barrette and Finance Minister Fleming about the $25 million held by Canadian Universities Foundation on behalf of the Quebec universities may involve this formula:

- Quebec universities would request CUF to pay them the amounts to which each is entitled under the federal law establishing the foundation as the agent handling federal grants payments to all Canadian universities.
- The universities would then turn the money over to the education sinking fund to be established by Bill No. 3 of the Quebec Legislature.

The bill, now before the legislature, establishes the sinking fund for university building purposes.

It permits the Quebec government to guarantee debts incurred by the universities for building, pay the interest charges, and even assume principal payments.

The universities would have every incentive to "follow through" on the formula, rather than, as they would be legally entitled to do, retain the money themselves.

The Quebec government has introduced four education bills into the present legislative session which, taken together, guarantee a generous program of government assistance to universities — including some $60 million to $70 million for building in the next few years.

By handing the $25 million over to the province the Quebec universities would be assuring themselves of favorable treatment in the government education assistance program.

They would get their $25 million back, plus a great deal more.

The $25 million has accumulated in the hands of CUF in the four years that the body has acted as distribution agent for the federal university grants.

Giving the foundation—which is made up of the heads of all Canadian universities—this responsibility was a federal idea to overcome Quebec's objection to accepting education money from federal sources.

It didn't work.

Under government pressure, the Quebec universities rejected CUF in its role of "middleman" and refrained from asking for the money to which they were entitled.

The federal government refused to make the payments direct to the Quebec Treasury because it would have had to make the same offer to the other nine provinces, thereby scrapping the basis of its university assistance scheme.

The new formula, it is anticipated, will get around both sets of objections.

The Quebec government would become handling agent for the $25 million.

Because it would receive the money from its own universities, no awkward constitutional issue would be raised by the fact that other provinces did not get the privilege of handling federal university grants.

Universities in the other nine provinces have received some $60 million from the federal treasury via CUF in the four fiscal years in which the $25 million has accumulated.

These payments are now accomplished facts and no provincial objections are anticipated here to the fact that the Quebec government and its universities may agree on a different method of handling.

The refusal since 1950 of Quebec's universities to accept federal grants has left two further issues still hanging fire between Quebec and the federal government.

▸ **The $16 million** held by Canada Council on behalf of Quebec universities.

It's possible that this could be settled by a formula similar to that proposed for the $25 million held by CUF.

▸ **Regular payment of federal university grants.**

There is every possibility that this will be settled by the federal government's "tax abatement" offer (**FP**, Nov. 28, Dec. 26).

Three years ago, the federal government handed the Canada Council $50 million to establish a "university capital grants fund" from which colleges could receive matching grants for buildings.

Although it wasn't required to do so, the Canada Council adopted the principle that this money, like the per capita grants, would be apportioned between provinces on the basis of population.

On this basis, Quebec universities are entitled to $16 million of $40 million now in the fund.

Transferring this $16 million to the Quebec government via a formula similar to that proposed for the $25 million held by CUF may be a more complicated procedure because universities are supposed to match Canada Council grants, and the council must approve the projects.

But, it is anticipated here that with some give and take on either side, it will be managed.

The issue of regular payments to Quebec universities is under negotiation on the basis of the federal offer to grant Quebec an abatement of 1% of federal corporation tax.

Quebec can raise its own corporation tax from the present 9% of taxable income over $10,000 to 10% and make its own grants to universities from this money.

This issue is so close to settlement that Quebec has introduced Bill 60 into the legislature increasing the provincial corporation tax by 1% and Bill 58 providing for provincial per capita grants in 1960-61 and thereafter.

The sticking point on this issue is the return to Ottawa of money collected under the corporation tax abatement in excess of the amount paid out to universities.

The federal government must extend to all provinces the same "tax abatement" offer it makes to Quebec and Ottawa is insisting that the difference between collections and payments to universities be returned.

Otherwise universities in richer provinces will benefit more than those in poorer provinces — violating the principle that assistance be given impartially on the basis of need, as demonstrated by size of population.

Quebec is trying to hang onto as much of the difference between collections and sums paid out as it can.

Under Bill 60 before the Quebec Legislature, revenues from the 1% increase in corporation tax are to be paid into an "educational fund" established by Quebec in 1946.

This fund now has revenues of about $35 million a year from provincial sales tax and from special taxes on hydro, mining and pulp and paper companies.

So far, the "education fund" has been used to support Quebec primary and secondary education.

Now, thanks to the new corporation tax, it will be used to pay per capita grants to universities.

Bill 60 also provides that money received for educational purposes from the federal government, the Canada Council or the Canadian Universities Foundation may be paid either into the "education fund" or into the education sinking fund to be established by Bill 3.

Quebec has thus made legislative provision for the success of current negotiations about the CUF and Canada Council money under the new "Barrette-Fleming formula."

Mink Getting Common Now, Silver Fox Making Comeback

From Our Own Correspondent

CHARLOTTETOWN — The sly old fox is making a comeback . . . in the fur coat department.

The reason:

Mink is becoming common.

That's what members of the Canadian National Silver Fox Breeders' Association were told at their annual meeting by Dr. W. R. Russell, retiring president.

He said fur buyers in the U. S. are advising Canadian fox ranchers of the new trend and that good breeding stock is scarce.

Price of a good female fox in Ontario: $500.

Association's promotion program for 1959 includes donation of a silver fox garment to the Canadian fur fashion convention to be held in Montreal in April and donation of a ranch pelt display to the Department of Trade and Commerce, Ottawa, for use in overseas trade fair booths in Frankfurt, Paris and Johannesburg.

TSE Awaits New Filing On Cockshutt Realty Plans

The Toronto Stock Exchange is continuing to gather information concerning recent trading activity in the shares of **Cockshutt Farm Equipment Ltd.** of Brantford, Ont., and the firm's proposed acquisition of a Florida real estate company (**FP**, Feb. 6).

In response to a TSE request, Cockshutt supplied a filing statement last week. This statement contained no information about the Florida transaction, since, in the opinion of Cockshutt's solicitors, it may not be completed for some time.

The TSE has asked Cockshutt to make a second filing statement when information is available concerning the Florida real estate plans.

W. L. Somerville, TSE executive vice-president, said that the action was not intended to cast a reflection upon Cockshutt, but followed the established TSE policy of ensuring full disclosure of any proposed major changes in operations or outstanding capital of any listed company.

President Benno B. Bechhold said that Cockshutt would continue to comply with all requirements of stock exchanges on which it is listed, and that final arrangements would be submitted before completion.

Cockshutt is negotiating with shareholders of **N. K. Winston-Sanson Florida Corp.** to acquire the Florida firm's 1,050,000 shares in exchange for 380,000 Cockshutt shares.

It is planned to deliver 50,000 Cockshutt shares to Winston-Sanson upon signing of the agreement.

The remaining 330,000 shares would be held in escrow, to be released when cash flow from the property reached $29 a share ($1.1 million) or net profit reached $2.60 per share after taxes, or a combination of both.

Cockshutt sales in the three months ended Jan. 31 are reported to be 20% higher than in the first quarter of the previous fiscal year.

Analogue Controls Sells Common Shares, Warrants

A new issue of 30,000 common shares and 30,000 warrants of **Analogue Controls Inc.**, Hicksville, N. Y., has been placed privately by underwriters **Annett & Co.** of Toronto.

Price was $10 for one share and one warrant.

Each warrant entitles the holder to buy one common share, par 1c, at $10 until Oct. 31, 1964, the exercise price increasing $1 annually to $15 until warrants expire Oct. 31, 1969.

Recent price of $6½ was the 1960 low.

High was $9⅛ at the beginning of the year.

Last year's range was $12½-$5½.

The warrants have been trading around $3-$4, with a range last year of $7-$2½.

Net loss in fiscal year ended Oct. 31, 1959, was $22,555 or 7c per common share, compared with net profit of $28,623 or 9c a share in previous fiscal year.

Sales amounted to $1,388,625, up from $719,994 in 1957-58.

A source close to the company predicted that current year's sales would reach $2 million, if a current project on air bearings attains its expected commercial success.

Applications of this project include dental drills, high temperature electric motors, and the measurement of torque of ball bearings.

Other research projects under way would have applications in the data processing field.

Proceeds of the issue will be used for general corporate purposes, including repayment of bank loans amounting to $113,521 at Jan. 15.

Underwriters paid the company $9.50 per share and 10c per warrant, purchasing an additional 7,000 warrants for investment.

A similar issue, consisting of 40,000 shares and 40,000 warrants at $8 per unit, was offered last year (**FP**, March 21, 1959).

Terms of warrants were the same in each case.

Incorporated in 1954, Analogue Controls manufactures electromechanical devices, principally precision potentiometers, in a 25,000 sq. ft. leased plant at Hicksville. It employs 120.

Manufacturing capacity for potentiometers has been doubled in the past year.

Products are used largely in aircraft and guided missiles.

(A potentiometer is an instrument to measure or compare voltages. It operates by converting mechanical motion into an electrical equivalent. Precision potentiometers are widely used in control and computing devices.).

President is Frank R. Bradley, Jr., who formerly participated in design and development of potentiometers for Analogue as a consultant, and who controls a company which for several years has been Analogue's sales representative.

The former president, Karl Birken of New York, continues as an unpaid consultant and director.

Chairman Sandford Reis of Ridgewood, N. J., is president of his own firm of financial consultants and of **Great Northern Gas Utilities Ltd.** of Edmonton.

Pro forma balance sheet at Oct. 31, 1959, after giving effect to the current financing, shows current assets of $863,155, total assets of $1,279,468, current liabilities of $306,958, long term debt of $212,871, paid-in surplus of $702,299, and deficit of $7,792.

Capitalization included 1,000 authorized and 612 outstanding $100 par 5% non-cumulative convertible preferred shares, and 700,000 authorized and 393,200 outstanding 1c par common shares.

Jamaica Utility Per Share Profit Up 21% in 1959

MONTREAL (Staff) — Net income of **Jamaica Public Service Co.** (the operating company) in December, 1959, was £40,164, down 15.7% from £47,661 in corresponding 1958.

Total operating revenues at £180,064 were up 18%, but total operating revenue deductions at £132,857, were 37% higher.

For 1959, net income was £522,599, up 18.1%

Net income applicable to common shares of **Jamaica Public Service Ltd.** (the parent company) rose 21% to $1,254,665, ($1,035,920 in 1958), or $3.10 ($2.56) per common share.

Earnings are converted to Canadian funds on the basis of $2.67 to the pound.

Trans-Video Halts Filming

Film producing operations of **Trans-Video Productions Ltd.** have been halted.

A director says that company's plans to sell certain TV serials, based on pilot films, have not materialized.

Trans-Video, formed last April, was the first Canadian TV production company to have been publicly financed.

An issue of $500,000 6½% 10-year convertible debentures and 50,000 npv common shares was sold last year (**FP**, July 25). Debenture interest was paid last month.

Company negotiated its release from "onerous" contracts, the spokesman said, and now has one full-time employee.

Future plans will be directed toward investment participation in TV and film production in Canada, rather than direct participation. Discussions along these lines are being held with a privately-owned Toronto film company.

Trans-Video originally acquired a 50% interest in the MGM studio's rights to a projected TV serial, based on a successful movie of the early 1940s named "National Velvet".

It has transferred these rights to Robert Maxwell as part of the terms of his release from his one-year contract as executive vice-president, but will share equally with Maxwell in profits from any National Velvet serial that may be produced.

Maxwell, now in Hollywood, and MGM are planning to produce a pilot film for the projected series. If the pilot episode is successful, the series might yet be made in Canada, the Trans-Video director said.

Trans-Video's stock is not listed, and transactions in its securities have been infrequent.

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(Par value: $2.00)

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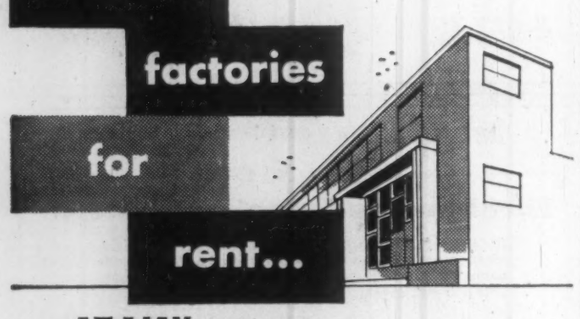

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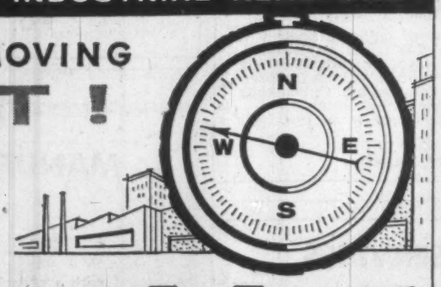

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Europe-Owned Farm Firm To Enlarge Holdings Here

MONTREAL (Staff) — A recently formed corporate farm project in Quebec — backed by European capital — has undertaken new financing to enlarge its Canadian holdings.

This week 750,000 common shares ($2 par) of **Soca Ltee.** were expected to be offered at par by a syndicate headed by **Graham, Armstrong Securities Ltd.**

Of the offering, 85% or 637,000 shares have already been subscribed by a powerful French-Swiss-English banking group which controls Soca. The group is headed by **Rivaud & Co.**, a French bank, with numerous corporate farming and commodity ventures in various parts of the world.

Soca itself is a holding company which owns 65% of the issued stock of **Société de Culture des Terres Noirs Ltée.**

Société (**FP**, Oct. 3) owns 3,020 arpents (an arpent is slightly smaller than an acre) of black earth farmland in the Sherrington area, where it is developing a vegetable producing operation. At St. Elizabeth, company holds 2,400 arpents of grazing land where it is establishing a cattle-raising project.

The St. Elizabeth operation — ultra-modern and mechanized— will eventually accommodate 1,500 head of cattle tended by only two men, **FP** understands. At present it is about 50% complete.

Proceeds of the issue are for acquisition of additional land and for construction of plant and equipment required by the two farms.

After giving effect to the issue, outstanding capitalization of Soca will comprise 804,500 common shares ($2 par) and 93,100 preferred shares ($10 par).

In the year ended Nov. 30, 1959, Soca had a net loss of about $80,000. This was the company's first year of operation.

Ready Reference On Defunct Mines

A ready reference on more than 13,000 dormant or defunct mining companies has been compiled by **Northern Miner Press.**

This hard cover book of 420 pages should be useful to banks, trust companies, lawyers and others who have occasion to look up old companies.

It took three years to compile the reference book. Information attempts to indicate if shares in an old company have any value and where enquiries should go. Canadian Mines Register costs $15.

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Compton's Portfolio

A Managed Investment Account

Invested in 1944	$10,000
Account latest valuation	$35,036

Stocks Losing Popularity?

Compton's manager feels that one reason for the current stock market decline, particularly in the U. S., is that stocks have lost part of their postwar popularity.

On top of this, the stock market still looks for convincing proof that the buoyant economic activity forecast for 1960 will actually take place, the manager says.

During the month ended Feb. 15, the value of Compton's account fell by $1,353, or 3.7%.

Here is the manager's report:

The stock market awaits convincing proof that the buoyant economic activity which had been forecast for 1960 will actually take place. Meantime stocks are attempting to find a base which will reflect a more conservative appraisal of this year's business.

Between Jan. 15 and Feb. 15 the Toronto Stock Exchange industrial index declined 4.6%. Compton's account value declined by $1,353, or 3.7%. Including the Government of Canada bonds purchased in the latest month and the cash on hand, his account at Feb. 15 stood at $35,036. His prospective annual income is $1,477.

A comparison of the quotations at Feb. 15 with those of the preceding month shows some weakness in the cyclical groups, such as steels, in recognition of the fact that inventories of steel are being built up more rapidly than had earlier been thought probable, and that automobile sales, while good, are not running at the record levels anticipated.

All cyclical stocks are not behaving in the same manner, however. **Canadian Pacific Railway**, for example, showed a fractional gain in the month, possibly because the rails in the U. S. are acting a little better than the industrials.

International Nickel also posted a modest advance as directors proposed a 2-for-1 stock split and an increase in the regular dividend.

Such minor divergencies in the cyclical groups suggest the possibility of improving business later in the year, although this is not yet evident in the leading indicators such as construction contract awards and manufacturers new orders.

Meantime, business is operating at a high level and on a sound basis, judging by the limited build-up of inventories and the reduction of bank loans.

The majority view is that stock have lost part of their postwar popularity, but that in a U. S. election year one can look for the type of conditions which will foster a rally which will facilitate further liquidation.

In the Canadian market the advance was less pronounced and the decline has similarly been more moderate. A special feature is the liquidation by investment trusts owned in the U. S., some of whose shareholders are showing a preference for cash. This factor is not likely to be a continuing one.

During the month ended Feb. 15, Compton received $126.50 in dividends. After paying out $147.40 needed to make up the balance between receipts and disbursements in the switch from **Bank of Nova Scotia** and **Shawinigan Water & Power** into Canada bonds (**FP**, Feb. 13), his cash balance stood at $572.38.

Here is his portfolio at Feb. 15:

		Cost — Per	Mkt. Share —
	Common Stocks:	$	$
100	Abitibi Pwr. & Pap.	18.99	36.25
50	Alta. Gas Tr. Line A	23.25	24.875
25	Algoma Steel	39.62	34.50
50	Bell Telephone	40.37	43.75
100	B. C. Power	38.37	33.125
50	Cdn. Breweries	34.62	36.00
125	CPR	32.99	24.875
6	Confederation Life	138.87	147.50
50	R. L. Crain	18.75	20.50
25	International Nickel	68.40	101.75
50	Kerr-Addison	20.00	20.875
400	Macassa	2.80	2.66
50	Price Brothers	43.50	40.00
100	N. Slater & Co.	17.31	27.75
15	Steel Co. of Can.	66.61	78.00
50	Toronto Iron A	30.35	16.50
	Bonds:		
$5000	Govt. of Can. 5¼%, due Oct. 1/62	99.50	100.20

SUMMARY

	Book Value	Mkt. Value Feb. 15	Prosp. Annual Income
Bonds	$4,975	$5,010	$275
Com. stocks	27,910	29,453	1,202
Cash	572	572	....
	$33,458	$35,036	$1,477
Current market value			$35,035.75
Prosp. annual income			1,476.75
Average yld. on orig. $10,000			14.77%
Average yld. on curr. mkt. val.			4.2%

Navy's 50th Anniversary Boosts Halifax Tourism

From Our Own Correspondent

HALIFAX — Tourists are expected to spend as much as $10 million here in 1960.

The 1958 total: $8 million.

Reasons for the expected increase:

- **This year's 50th anniversary** celebrations of the Royal Canadian Navy.
- **Forty national, regional and provincial** organizations will hold conventions in Halifax this spring and summer.
- **Three popular tourist attractions** again will flourish elsewhere in Nova Scotia.

They are the Gaelic Mod in Cape Breton, the Highland Games at Antigonish and the Festival of Arts at Tatamagouche.

- **Sydney will spend $50,000** to mark its 175th anniversary.

Generally visitors to other centres spend some time in the capital so that stimulation of tourism even in rural areas is bound to help the historic port.

Halifax's largest hotels are preparing for the heavy influx of Canadian and U. S. tourists by making extensive additions to their facilities.

Work on the Nova Scotia Hotel ($4 million) and the Lord Nelson Hotel ($1.5 million) is expected to be completed this season.

A 100-unit motel ($1 million) is scheduled to be built this year in the heart of the city.

In May, HMC Dockyard will be opened to the public.

The 40 ships of the Atlantic fleet will mark the RCN birthday with regattas and reviews.

Meanwhile the Tourist and Convention Bureau will intensify its campaign to bring visitors to Halifax. Tons of literature will be issued on this continent and abroad, stressing advantages of a vacation in Nova Scotia and in historic, scenic Halifax.

114 Stocks Yield Averages 4.67%

The average yield on 114 dividend-paying stocks on the Toronto Stock Exchange, as compiled by Moss, Lawson & Co., on the prices of Feb. 15 was 4.67%, up .03% from the previous week.

The current yield compares with 4.51% one month ago and 3.98% in the corresponding week last year.

Here is the yield by the various groups:

	Feb. 15 %	Week Ago %	Month Ago %	Year Ago %
Common	4.32	4.27	4.12	3.62
Pfd. & A	5.39	5.38	5.40	4.70
Mining	5.29	5.30	5.12	4.57
Banks	3.53	3.50	3.34	3.07

LOW COST HOUSING
From Our Own Correspondent

SASKATOON — Houses for $495 down are planned for Saskatoon. Fourteen companies have indicated they will build a total of 800 low-down-payment units in two new residential subdivisions the city has earmarked for the purpose.

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Toronto Group Now Plans Huge Jamaica Apartments

A Toronto group now plans to make what was originally a $5 million co-operative apartment project in Jamaica into a $12 million-$15 million development.

First stage is already finished and the entire project will be completed within a year. Excavation for the co-operative apartment hotel has started.

Included: Penthouse apartments that will sell for $150,000 each.

Change in plans was announced this week by **Ponzo-MacKenzie Ltd.**, Toronto real estate development company, headed by James Ponzo, Douglas MacKenzie and Jules Sokoloff, all of Toronto.

They also head **Carib-Ocho Rios Sea Club Apartments Ltd.**

Originally, the project at Ocho Rios, Jamaica, provided for a resort hotel of 180 rooms and four two-story apartment buildings containing 100 rooms, MacKenzie says.

The resort hotel will now be a co-operative apartment hotel containing 125 suites. A second co-operative apartment hotel has been inserted into the plan and will have 200 suites.

Four small buildings will provide 100 suites, plus 75 "super luxury" suites. Total: 500 suites.

Another feature: Company will act as rental agent for purchasers of the co-operative apartments who want to rent them for part of the season.

Ponzo says the night club building, beach cabana, swimming pool, health spa and yacht basin included in the first plan, have been retained.

Prices of ordinary suites: From $16,000 to $42,000.

Sokoloff claims that 25% of the first portion of the development has been sold without sales promotion. Sales campaign will be started in Canada, U. S. and Jamaica this month.

Buyers to date have been residents of Toronto, New York City, the New England states, and even London, Eng.

According to MacKenzie:

- **One large New York City corporation** has offered to buy one of the smaller co-operative apartment buildings. It would use this as accommodation for its executives on leave each year.
- **Other companies** plan to buy one or two suites for the same purpose.
- **To co-ordinate sales,** company has become associated with **Douglas-Gibbons, Holly-day & Ives,** New York. Toronto office of Ponzo MacKenzie is in charge of sales here and in Jamaica.
- **The three partners** also have their own construction company in Jamaica, **Ocho Rios Construction Co.,** which is doing all the work on the project.

According to Ponzo, they found it more efficient and profitable to have their own company.

Ponzo and MacKenzie are the developers and promoters in the enterprise and Sokoloff is in charge of construction activities.

Other companies controlled by the partnership: **Ocho Rios Hotels Ltd., Ponzo-MacKenzie Development Co., County Investments.**

Harding Carpets Sales Lower

Sales of **Harding Carpets Ltd.,** Brantford, in current fiscal year (started Nov. 1) are running slightly behind last year, President C. M. Harding told the annual meeting.

Profit margins are somewhat lower than last year.

Mr. Harding pointed out that company has not yet shipped any large quantity of tufted carpet and is expecting that volume from this will improve results over the next few months.

Net earnings in year ended Oct. 31, 1959, were equal to $2.63 per share ($1.28 year before).

H. J. McLaughlin, a director since company's inception, was elected vice - president. C. V. Banks resigned as vice-president but remains a director.

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Successful background in promotion, advertising and sales management with national company. Excellent production record. Age 31.
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CENTRAL AMERICA PROFESSIONAL ENGINEER
travelling throughout Central America during summer of 1960 will undertake additional assignments. Reliable, confidential, conscientious. For resume of qualifications, references, write to:
Box 277, The Financial Post, Toronto

REPRESENTATION IN U.K.
available
University trained, wide administrative and accounting experience. Good organizer, experience systems and sales. Enthusiastic, seeking challenge and change. Age 36, married.
Box 262, The Financial Post, Toronto

CIVIL ENGINEER
with six years experience of varied nature in the engineering field. At present finishing an M.Sc. course, seeks to obtain a responsible position with a reliable firm in the structural design or hydraulics field.
Box 264, The Financial Post, Toronto

FACTORY MANAGER
55 yrs. Perfect health. 30 yrs. management and executive experience varied types of light metal mfg. Practical experience only — no degree. Bilingual. Presently engaged Montreal. Wish to change for personal reasons. Salary $8,000 to $10,000. Resume on request. Willing to relocate.
Box 266, The Financial Post, Toronto

MANAGEMENT
If these attributes are important in the man you want, may we meet in confidence?
1. Extensive General Management, Administration, Organization & Sales.
2. Used to making decisions and getting things done.
3. Works smoothly with other executives and staff.
4. Can plan, direct and co-ordinate.
5. Imagination and initiative with integrity and loyalty.
6. Used to and requires senior responsibility.

Planned, diversified experience of interest to principals or senior executive controlling multi-investment or holding company or organization being set up or re-organized. University. Age 40.
Box 282,
The Financial Post, Toronto

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Male Presently Employed, desires change to progressive firm. Twenty years experience in office management, accountancy, credits, collection, manufacture and sales. Well educated, fully qualified to manage business at a profit. Excellent references. Interested parties may phone HU 5-8712 or write
Box 275, The Financial Post, Toronto

PROPERTY MANAGEMENT
Real Estate Broker, 44, experienced in all aspects of industrial, commercial and residential real estate. Seeks position with Property Department of large industry or store chain, or with development or investment company. No objection to travel. Long term prospects more important than salary.
Box 271, The Financial Post, Toronto

FOR SALE! 1 Male Human, 31 years; presently Adv. & Sales Prom. Mgr. of National Canadian organization, will sell his services to the highest bidder. Prefers to have H.Q. in Western Can. for compassionate reasons, but free to travel. Reason for selling: I NEED THE MONEY.
Box 265, The Financial Post, Toronto

ADMINISTRATIVE POST
Reliable clerical supervisor/office manager seeking position of responsibility with scope for advancement in administration. Twenty years extensive office experience is available in October. Willing to relocate. Salary open.
Box 258, The Financial Post, Toronto

ANNOUNCING

Important appointments in Canadian Industry, Finance, Business and Government

Brantford Coach & Body Ltd. (Brantford) — B. M. Bechhold, chairman; Roberts S. Mann, vice-president; P. C. Cumyn and V. M. Seabrook, directors.

Canada Cement Co. (Montreal) — V. C. Hamilton, vice-president and assistant general manager; R. S. Aiken, vice-president.

Canada Life Assurance Co. (Toronto) — H. T. Crozier Taylor, officer of the company and assistant superintendent of agencies.

Canada Permanent Mortgage Corp. (Toronto) — Henry S. Gooderham, vice-president.

Canadian Fairbanks-Morse Co. (Montreal) — Douglas R. Cooper, manager, machinery and supply division.

Canadian Fire Insurance and Canadian Indemnity Co. (Toronto) — T. Bruce Ross, vice-president.

Canadian Industries Ltd. (Montreal) —John H. Johnston, general credit manager; H. G. Campbell, sales manager, ammunition division.

Canadian Liquid Air Co. (Montreal) —James E. Wilkin, secretary-treasurer; M. V. Breber, assistant treasurer; Gordon C. Naylor, manager, control division.

J. I. Case Co. (Racine, Wis.) — William J. Grede, president.

Co-operative Life Insurance Co. (Regina)—W. A. Ritchie, agency superintendent.

Crown Life Insurance Co. (Toronto) —Frank H. Sherman, policyholders' director.

Cyanamid of Canada Ltd. (Montreal)—G. A. McIlveen, architectural representative, laminated products department.

Dominion Life Assurance Co. (Waterloo) — Harold J. Ball, director.

Dow Chemical of Canada Ltd. (Sarnia)—Ernest N. Banks, operations manager of the new west coast phenol plant near Vancouver.

Edwards of Canada Ltd. (Toronto) —Allan M. McIntosh, secretary-treasurer; Earland M. Dawson, operations manager.

Fleet Manufacturing Ltd. (Toronto) — George H. Elliott, director.

Ford Motor Co. of Canada (Toronto) —George A. Atkins, assistant general manager, Oakville operations; Thomas P. Monaghan, director, quality control.

Fraser Companies (Edmundston, N.B.) — K. W. Matheson, vice-president; C. T. Clark, vice-president, manufacturing; W. A. Ketchen, vice-president, technical services.

H. J. Heinz Co. of Canada (Leamington) — J. M. Page, vice-president, finance; C. C. Bailey, assistant secretary; R. G. Nelles, comptroller.

Hodgson Holdings (Toronto) — C. A. McKechnie, general manager and director of **Hodgson Development Ltd., Skyline Hotel Toronto Ltd.** and **Skyline Hotel Montreal Ltd.**; D. D. Phelan, manager, **Skyline Hotel Toronto Ltd.** and manager of the **Skyline Hotel Montreal Ltd.** on its completion this fall; H. M. Bailey, manager, **Hodgson Development-Real Estate** division.

Hooker Chemical Corp. (Niagara Falls, N.Y.)—R. B. Graham, chief accountant.

Huron & Erie Mortgage Corp. and Canada Trust Co. (London, Ont.) —R. Hartley Paterson and F. Douglas Robertson, trust officers, business development department, Toronto office.

Hussman Refrigerator Co. (Brantford)—H. P. W. Giroux, manager, technical services department; Sinclair F. Macdonald, manager, shelving and checkouts sales and services.

John A. Huston Co. (Toronto) — J. D. Young, executive vice-president; W. Van Houten, vice-president and director.

Interprovincial Building Credits (Toronto)—K. B. Andras, director.

Kellogg Co. of Canada (London, Ont.) — A. W. Beattie, Montreal division manager; W. J. Turner, division manager, Vancouver district; R. N. Judge, Halifax division manager.

Maple Leaf Milling Co. (Toronto) —W. J. Smallacombe, secretary; J. W. Cargill, general traffic manager.

Menzies-Gibson Ltd. (Toronto) — J. W. Gibson, managing director; T. F. Braithwaite, general manager; Ray Cowling and Harold Brooks, co-managers, chain store operations; James Taylor, Canadian sales director; Robert Michaud, Quebec sales manager; Sidney Peatling, western divisional manager; Aime Chapdelaine, Manitoba and Saskatchewan sales manager.

Onward Manufacturing Co. (Kitchener) — R. T. Bauer and B. C. Abbs, district sales managers, **Speed-Wash Coin Laundry** department.

Patterson Chocolates Ltd. (Toronto) —Frank Sinclair, assistant general manager and sales manager; George Williams, assistant sales manager.

Polymer Corp. (Sarnia) — E. E. Gale, head of new staff group within the marketing division; Dr. P. B. Lumb, supervisor of technical services; H. A. Pfisterer, responsible to Mr. Gale for specific technical aspects of product development and evaluation.

Royal Bank of Canada (Montreal) A. F. Mayne, general manager, non-domestic business.

Royal Trust Co. (Montreal) — A. Searle Leach, member of the Winnipeg branch advisory board.

Rudel Machinery Co. (Montreal) — G. A. Rogers and John Aiken, textile machinery sales engineers for the province of Quebec.

Howard Smith Paper Mills (Montreal)—James N. Swinden, director; W. P. Nesbitt, general manager, pulp and paper division; S. J. Quattrocchi, manager of the company's Cornwall mill; H. S. Spencer, vice-president, **Alliance Paper Mills Ltd.**; D. C. Currie, manager of the Beauharnois mill.

Sparton Air Services Ltd. (Ottawa) —R. J. Reynolds, president; V. V. R. Symonds, general manager; J. A. Roberts, technical director.

Stone & Webster Canada Ltd. (Toronto) — Edmond B. Hymmen, chief engineer.

Toronto General Trusts Corp. (Toronto) — Donald A. Clark, member of the Winnipeg advisory Board.

Montreal Firm Broadens CGE's Repair Facilities

MONTREAL (Staff)—**Canadian General Electric Co.** is expanding its operations in Quebec.

Company has acquired all capital stock of **Montreal Armature Works Ltd.**, a company engaged in repair and rebuilding of electric motors and generators.

CGE says the company was acquired to "round out the repair and services offered by Canadian General Electric in the Quebec area".

For the present, Montreal Armature will continue to carry out much the same type of work it was doing prior to acquisition.

CGE, however, will also investigate what other repair and service work could be undertaken at the plant, FP understands.

Montreal Armature has a 45,000 ft. plant and employs about 85.

Price paid by CGE for the company has not been disclosed.

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CHIEF ACCOUNTANT

A company with Head Office in Toronto requires a Chief Accountant. Applicants should be Chartered Accountants or have other recognized accounting qualifications. Proven administrative ability in industry with emphasis on management accounts and budgetary controls is required.

Age preference 30-35 years.

Salary commensurate with qualifications.

Reply, in confidence, to:

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SALES ENGINEER

to sell components to the Radio-TV and Electronic Industries.

Reply in full detail.
Replies treated confidentially.
Box 228, The Financial Post, Toronto

EXPERIENCED ACCOUNTANT FOR SYSTEMS DEPT.

A large mining concern requires a system analyst with a sound accounting or auditing background for this head office.

Qualifications: Candidates should be familiar with corporate structures. Age, 20 to 40.

Experience: At least five years of business experience.

Work will include survey and analysis of clerical operations, systems, office equipment and communications as well as method design throughout the organization. Initial salary will depend on experience of the candidate. Please reply in confidence, stating age, experience, education and marital status to:

IRON ORE COMPANY OF CANADA
Personnel Dept.,
810 Cote de Liesse Road
Office No. 717
Montreal, P.Q.

ADMINISTRATIVE OFFICER

required by Department of Finance
OTTAWA
SALARY $8340 - $9420

The person selected will, under general direction of the Deputy Minister, handle difficult administrative and procedural matters, coordinate the discharge of administrative functions and assist the Deputy Minister in the performance of other related administrative duties.

Desirable qualifications include university graduation OR a good general education acquired as a result of adequate formal training and experience, administrative or executive ability and a number of years of experience in administration.

Details and application forms available at Civil Service Commission Offices, Offices of the National Employment Service and main Post Offices.

QUOTE COMPETITION NUMBER 60-578

SALES REPRESENTATIVE

Opportunity for earning $12,000 and up representing established Canadian manufacturer. Must have late model car. Territories open are British Columbia, Saskatchewan, and Maritimes.
Prefer men with experience selling aluminum windows and magazines.
Box 281, The Financial Post, Toronto

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EXPERIENCED SALESMAN OR JUNIOR EXECUTIVE WHO WANTS TO SELL

Nationally known financial concern and leader in its field has vacancy. No travel. Age 28-40. 20 year retirement and group insurance plan. Two years professional training. Salary plus incentive increases. Please outline experience and background in reply to:

Box 268, The Financial Post, Toronto

CHIEF PRODUCTS ENGINEER

For A U.S.A. Operation In The U.S.A.

Well known manufacturer of electro-mechanical products located in an attractive medium sized mid-western city, seeks an outstanding and well-rounded graduate engineer to take complete charge of a "family" of products—duties involve:

1—Determination of market needs and desirable product characteristics by actual field evaluation
2—Design conception (not drafting)
3—Supervision of prototype manufacture
4—Product supervision until volume production routine is established

Personal requirements—Age 25 to 39
Degree in Mechanical or Electrical Engineering
Willingness to live in the U.S.A.—essential
Attractive 5 figure salary offered
All moving and interview expenses paid. Initial interviews conducted in Toronto.

All enquiries and interviews will be kept in strictest confidence. Send detailed resume to

Box 278, The Financial Post, Toronto

PERSONNEL MANAGER

A growing multi-plant chemical company with 800 employees and Head Office located in Toronto, has an outstanding opportunity for a well qualified Personnel Manager.

Initially, the man selected will be responsible for development of personnel policies and procedures to cover salaried staff, with later addition of overall responsibility for labour relations activities.

This is an outstanding opportunity for an individual in the 35-45 age range with substantial well-rounded industrial relations experience. While not essential, a relevant university degree would be a definite asset.

Salary will be commensurate with experience.

Replies, which will be treated in strictest confidence, should state age, education, detailed experience and present salary and be addressed to:

WOODS, GORDON & CO.
15 Wellington Street West, Toronto 1, Ontario
MANAGEMENT CONSULTANTS

INDUSTRIAL ENGINEER
CONSULTING

To meet the increasing demands of its national practice, a large, diversified, and wholly Canadian consulting organization numbering among its clientele some of the country's largest corporations, requires an outstanding industrial engineer. He should be experienced in the development and installation of production planning and control procedures; application of work measurement techniques to direct and indirect labour; statistical work sampling; materials handling; plant layout; related areas of factory administration. An engineering degree is desirable but the right experience is more important than specific education. Remuneration will be commensurate with qualifications. This is a career opportunity of unusual attraction for a man who would enjoy the challenge, diversification and satisfaction of a top-level consulting career. Acting for the principals, applications should in the first instance be addressed to and will be reviewed by:

W. WALLACE MUIR & ASSOCIATES
LIMITED
63 SPARKS STREET OTTAWA

CAREERS

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HELP WANTED

CONTROLLER

A well established organization requires a Controller to take complete charge of all accounting and financial activities.

Applicants must have a successful record of achievement as a Controller, be currently earning a minimum of $10,000 per annum and have more than average executive abilities.

Age preference under 45 years.

Reply, in confidence, to:

URWICK, CURRIE
LIMITED
Management Consultants
80 King Street West, Toronto 1, Ontario

SALES MANAGER

Required by Heavy Construction Equipment Distributor. Excellent opportunity to become associated with active organization in Manitoba.

Applicants must have proven ability in the field and be capable of analyzing sales transactions and market potential. A thorough knowledge of used equipment market essential together with ability to provide motivation and direction to sales staff.

Full details regarding age, marital status, education, experience and salary requirement must be given in initial letter. All enquiries will be held in strict confidence.

Box 259, The Financial Post, Toronto

INTERNAL AUDITING SUPERVISOR

A senior position is presently available in the Toronto Head Office of a large Canadian Company for a qualified applicant who has had 5 to 10 years' industrial accounting experience some of which was in the internal auditing field. This position involves auditing responsiblities in all phases of the Company's operations from manufacturing through retail.

The successful applicant must have a recognized accounting degree.

Salary will be commensurate with experience and ability. An extensive Company paid fringe benefit program is provided.

If you are qualified, please write detailing age, education, present salary and experience to

Box 270, The Financial Post, Toronto

SENIOR FINANCIAL ANALYST

is required by Chemcell Limited. This Company is responsible for the financial management of Celanese Corporation of America's interests outside of the United States. These interests are, at the present time, mainly in Canada and in Latin-America.

The job is to appraise past and projected results of existing investments and to evaluate opportunities for new investments.

A thorough knowledge is needed of budgets and forecasts, analytical techniques and management accounting; a flair for writing interpretative reports from operating data and financial statements is essential. The person selected would also be expected to foster the growth and development of other analysts.

Academic requirements include an accounting degree plus economics or business administration.

If you have had several year's experience in this or a related field and meet the above qualifications, please reply in writing to:

Administrative Officer,
Chemcell Limited,
1600, Dorchester St. West, Montreal, P.Q.

POLYMER CHEMIST

We require a Polymer Chemist to work in research & development of Plastics. This is an excellent opportunity for a career with a progressive organization. Applicants must have a good degree in chemistry & preferably have some Industrial experience. Applications will be treated in strict confidence and should be addressed to

Box 240, The Financial Post, Toronto

Our own staff have been informed of this opening.

CALIFORNIA
offers opportunity for
BANK MANAGEMENT PERSONNEL

Our Branch expansion program affords unusual opportunities for capable bank officers who are qualified for positions of Manager or Assistant Manager. These positions offer good advancement opportunities to experienced men. Prefer ages 30-45 but will consider other applicants if qualified. A limited number of positions are also available for senior management personnel.

Substantial fringe benefits, including life insurance, sick leave, hospitalization, vacation and retirement at age 65 are available.

We invite applicants to submit in confidence, a resume of their work experience and personal background. Qualified applicants will be contacted directly to arrange for a personal interview. Address:

Box 261, The Financial Post, Toronto

FINANCIAL ANALYST

A large Canadian Manufacturing Company has immediate openings for qualified personnel to assist in the analysis of operations, including the development and application of control techniques relating to costs and revenue factors.

These opportunities are available in our Toronto Head Office to applicants with university degrees in commerce or business administration with approximately 3 years experience in cost control activities.

Salary will be commensurate with experience and training. An extensive company paid fringe benefit program is provided.

If you are interested and qualified please apply in writing detailing personal history, educational background and experience to

Box 263, The Financial Post, Toronto

GENERAL MANAGER

Our client, a multi unit organization, engaged in the distribution of consumer products in Eastern Canada, requires a bilingual General Manager. This executive will be directly responsible to the Board of Directors for the operations of all units in the organization.

Applicants must have a successful record in Sales Management and General Management, the latter at a level commensurate with this position.

Reply, in confidence, to:

URWICK, CURRIE
LIMITED
Management Consultants
507 Place d'Armes, Montreal, Quebec

CHARTERED ACCOUNTANT

(New Graduate)

Our progressive, well established growth company having a wide diversification of nationally advertised "3M" and "Scotch" Brand Products requires a recently graduated Chartered Accountant to be responsible for all elements of profit and loss reporting for an operating division. This position requires a strong and genuine interest in modern accounting procedures, forecasting and analytical reporting. Good future prospects.

Applications for this position will be treated in strict confidence and should be addressed, stating qualifications, experience, age and salary requirements and including a recent photograph to:

Personnel Manager
Minnesota Mining & Manufacturing of Canada Limited
P.O. Box 757, London, Ontario

CHIEF ECONOMIST

required by
National Energy Board
OTTAWA
Salary: $11,500 – $12,500

Duties involve responsiblity for the planning of all work undertaken by the Economics Branch of the National Energy Board.

Qualifications include university graduation with specialization in economics, extensive experience in economic analysis, many years of which shall have been in a position of senior responsibility and a knowledge of the problems of market analysis and industrial or resource development and management.

Details and application forms available at Civil Service Commission Offices, Offices of the National Employment Service and main Post Offices.

QUOTE COMPETITION NUMBER 60-851

Executives Available

This is A MESSAGE to TOP MANAGEMENT in Canada seeking or considering seasoned and proven Management Men in Technical Products and Equipment Operation.

1. General Manager or Vice-President Operations

Engineering graduate — proven experience at Top Management level in Canada and the United States.
Age 47—B.Sc Electrical Engineering, University of Toronto 1934.
Progressive experience:
(a) Production Engineering, industrial engineering, methods, etc.
(b) Management Consulting engineer
(c) Vice-President Canadian Management Consulting Firm
(d) Senior Operations, Marketing and Economics Analyst Automotive Canada and U.S.A.
(e) General Manager Agricultural Implements U.S.A.
(f) Vice-President Operations Electronic multi-plant operations U.S.A.
(g) Present Vice-President & General Manager—Household Appliances Operations U.S.A.
This Senior man wishes to return to Canada and is open for a new appointment.
Salary Range—$30,000 to $50,000.

2. Works Manager — Graduate Electrical Engineer, Age 45.

Background—Electrical Apparatus, Electronic Equipment, Commercial Plastics Products
(a) **Manager of Manufacturing**—Electrical Apparatus—10 million manufacturing cost. Responsible for Manufacturing, Purchasing, Industrial Engineering, Plant Engineering.
(b) **Factory Manager**—Electronics Components Manufacturing. Responsible for Branch Plant total operations, manufacturing, accounting, etc.
(c) **Plant Manager**—Plastics Product Manufacturing—Manufacturing value 2 Million dollars per annum of proprietary plastic and metal items. Responsible for all manufacturing, engineering and purchasing areas of company.
Salary Range $10,000 to $12,000 per annum.

3. Marketing Manager and/or Operations Manager — Age 42.

B.Sc. Chemical Engineering 1941.
Background—Chemical Industry and Building Product Industry
(a) Progressive experience in chemical industry—synthetic textile products.
(1) Process Studies in U.S.A. & Canada for planning and development of new synthetic textile plant built in Canada
(2) Production Supervisor military explosives plant
(3) Sales Representative synthetic textile fibres products
(4) Market and Production Sales Forecasts
(5) Sales Promotion and Sales Development Manager—Textile fibre products
(6) Technical Manager—Head Office—Textile fibre operations
(b) **Assistant General Manager**—Building Materials Marketing Engineering and Operations
Salary Range $12,000 to $15,000.

If you are interested in any of these candidates, please telephone or write to:

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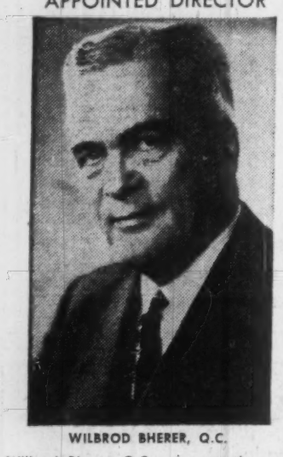

WILBROD BHERER, Q.C.

Wilbrod Bherer, Q.C., who recently was elected to the Board of Directors of Credit St Laurent Inc. (St. Lawrence Credit Corporation). Mr. Bherer is a partner in the Law Firm of Bherer, Juneau & Cote in Quebec City, chairman of the Board of Geo. T. Davie & Son, Lauzon, Que., director of La Prevoyance Cie d'Assurance, director of National Canadian Bank and director of Canadian Vickers Ltd.

European Roundup

NEWS FROM THE BUSINESS CAPITALS OF EUROPE . . .

By ERNEST WAENGLER

WHILE Europe's industrial integration is making good progress, the development of a common agricultural policy is even slower and more controversial than had been anticipated.

Europe's future attitude toward food production and food imports will have a great influence on Canada's export pattern. In the first 11 months of 1959, we shipped over $83 million worth of wheat alone to the six Common Market countries.

Negotiations scheduled for the next six months will probably shed more light on our future chances in this field, but in the meantime several countries have clarified their conflicting viewpoints.

France, ECM's No. 1 producer of foodstuffs, aims for agricultural self-sufficiency of the Inner Six which would assure her of ready markets for her agricultural surplus and guarantee her a leading position in deciding food policies.

To a degree, this position has been accepted by the ECM Agricultural Commission which is now adding up the member countries' food production and needs to determine how much has to be brought in from the outside and which has asked members in the meantime not to make import commitments toward outsiders beyond the existing quotas.

Germany strongly opposes the principle of self-sufficiency and insists that the "traditional flow of food products" must be maintained, meaning trade with European non-ECM countries as well as overseas.

* * *

DENMARK has announced the abolition of import restrictions, but has warned at the same time that 1960 will be an austerity year.

After March 1, 1960, import from dollar countries will be put on the same basis as that from Europe.

In the past year, consumption in Denmark has increased twice as much as production and the boom has resulted in heavy inflationary pressures and dwindling currency reserves.

The National Bank has raised the re-discount rate to 5.5%, the second highest in Europe (after Spain) and the other banks and savings institutes have increased the interest on deposits to rates ranging from 3% on current accounts to 5% on deposits tied up for six months or more.

Despite political pressures, it is considered unlikely that there will be any tax reductions this year because the government is worried that the boom may get out of hand and jeopardize the Danish position in the European Free Trade Association.

Canada's exports to Denmark have remained stationary at about $5 million with imports from Denmark increased from $5.2 million to $6.6 million for the first three quarters of the year.

* * *

RUSSIA has appealed to France to forget about restrictions on the export of certain strategic materials to communist countries and to get started on a free exchange of goods without discrimination.

In a speech in Paris, Soviet Ambassador Vinogradov claimed that France is selling only a third as much to Russia as Russia is willing to buy from her, despite the fact that France has reduced her purchases of Soviet petroleum products because of her own increased oil production.

IN SEVERAL European countries, especially in France, political parties are worried that the formation of large trading blocks may lead to the formation of huge industrial corporations that would dominate a market in which smaller companies could no longer compete.

A French liberal deputy in the European Parliament has now suggested a remedy which he claims, could be a practical compromise between a semi-monopolistic free-for-all and the outright nationalization of large concerns which is demanded by some socialist parties.

The shares of the large enterprises situated in the Common Market, he proposed, should be sold on a broad basis in all member countries.

Half of the non-voting stock should be sold to small investors through the stock exchanges of the Inner Six and half of the voting stock should be transferred to the governments or state banks.

* * *

WHAT IS DESCRIBED as "the world's biggest trade agreement" has been concluded between the Soviet Union, and East Germany, providing for an exchange of $12 billion worth of goods over a period of five years.

Russia will deliver coal, steel, petroleum and lumber in exchange for machinery.

The agreement is seen as the final step toward complete integration of East Germany into the Soviet block.

Last year, about 45% of East Germany's foreign trade was with Russia. Under the new pact, Russia's share will increase to about 70%.

* * *

A REVOLUTIONARY Russian invention — amphibious ultrasonic harvesting — has reached the stage of commercial availability, according to reports in the Soviet trade press.

A machine that cuts down plants by sound waves with a frequency of 20,000 per sec. can be used on land or below water.

It provides a fast and inexpensive method to free canals and port installations of weeds and other plant growth, the Russians say.

THE INVESTMENT FUNDS

Mutual Accumulating Fund Buys Short-Term Notes

Mutual Accumulating Fund, Vancouver, net assets totaling $24,298,285 at Dec. 31, 1959 were 7.3% higher than three months earlier and 32.3% higher than a year before.

Net assets per share at $7.43 were up 2.2% from $7.27 at Sept. 30, 1959.

Of the total net assets at the end of 1959, **Mutual Income Fund** proportion stood at $11,996,766, equal to $5.03 per M.I.F. share. This represented an increase of .8% over $4.99 per share three months earlier.

During the quarter, the fund increased its holdings of bonds and notes to 14.8% of the portfolio from 12.8% at Sept. 30, 1959.

Holdings of four common stocks were increased including **Noranda Mines** and **Consumers' Gas Co.** and three were reduced. No new common stocks were added to the portfolio and holdings of preferreds remained the same.

	Amount held Dec. 31 1959 $	Change since Sept. 30 1959 $
Bonds		
B.C. Packers 5% note	500,000	+500,000
Do. 5½% note	nil	—750,000
Canada, 5½%/62	500,000	+500,000
Ind. Accept. 5¼-½% notes	750,000	+750,000
Imp. Invest. 5½% note	500,000	+500,000
Loblaw Groc. 5¾% note	nil	—250,000
Simpsons 5¼% note	nil	—500,000
Common	—shares—	
Massey-Ferguson	54,300	—5,800
B.C. Forest Prod.	25,000	—20,000
Gunnar Mines	1,700	—3,300
Inter. Nickel	4,000	+500
Noranda Mines	3,000	+2,000
Consumers Gas Co.	12,000	+9,000
Moore Corp.	15,400	+400

Quebec Natural Gas Sales Gain Fast, Cut Net Loss

MONTREAL (Staff) — **Quebec Natural Gas Corp.** operated at a loss in the six months ended Dec. 31 but monthly losses are growing progressively smaller.

Indications are that operations will continue to show improvement, according to a statement to shareholders.

In September **Commonwealth Services Inc.** forecast net loss of $672,382 for Quebec Natural Gas in year ending June 30, 1960 (**FP**, Sept. 12). This compares with loss of $3.8 million in the 1958-59 fiscal period.

Comparing 1959 to 1958, company's gas sales in December jumped 56% to 829.8 million cu. ft. and gross gas revenues were up 46% to $1.3 million.

January results showed a similar impressive increase, FP understands.

A new peak for maximum 24-hour gas send-out was established Jan. 11 with a total of 42.5 million cu. ft. This is 53% greater than the 27.7 million cu. ft. record of the previous fiscal year, reached in January, 1959.

Gas is now flowing into the new cement plant of **Miron & Freres,** QNG's biggest new customer with potential annual requirements of 4,750 million cu. ft.

Another new customer, added this month, is **Iroquois Glass Co.** — a subsidiary of **Sogemines Ltd.** — in the South Shore industrial development of Candiac.

Extension of gas distribution facilities southward across the St. Lawrence river was completed in late August, representing capital outlay of $5 million.

Executive Vice-president Leonard Milano believes this area offers the company's greatest opportunity for expansion.

Total expenditures on property improvements and additions were $9 million in the six months ended Dec. 31.

The 56% increase in December sales was achieved despite considerably warmer weather than in December a year ago and without addition of new large industrial business awaiting completion of customer's facilities.

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MAKE WAY FOR ALITALIA!

Next month, with its first non-stop flight from Montreal to Milan and Rome, Alitalia inaugurates a great new travel service for Canadians. Starting March 2nd, you can fly from Canada to 31 other countries in Europe, Africa, the Middle East and Far East on Alitalia, the world's fastest-growing airline. Based on more than 30 years of international experience, Alitalia offers incomparable service in every detail, including traditional Italian hospitality, unsurpassed comfort, and the finest cuisine airborne anywhere. It's what you would expect of Italy's airline. Italy has had 2,000 years of experience in catering to the varying needs and comforts of seasoned world travelers. So, on and after Wednesday, March 2nd: Eyes on the skies, Canada! That will be Alitalia up there!

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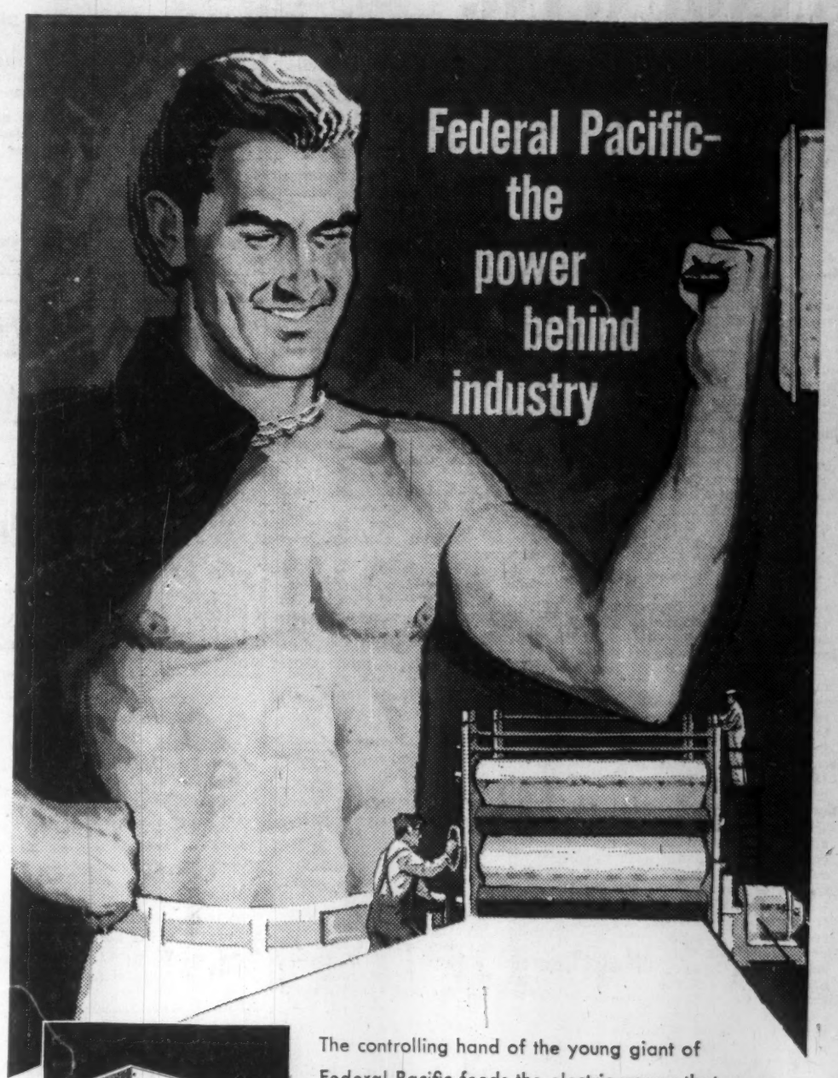
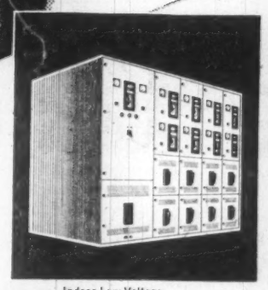
For immediate reservations, see your approved IATA Travel Agent or Railway Agent. Alitalia has offices in Montreal and Toronto.





Indoor Low Voltage Metal-Enclosed Switchgear

The controlling hand of the young giant of Federal Pacific feeds the electric power that drives Canadian industry. A steady dependable hand, relied on by industries large and small, from paper mills to woodworking shops. Federal Pacific equipment for the distribution of electric power has become the giant upon which Canadian industry from coast to coast relies.

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FPE CANADA LTD. The Best in Electrical Distribution and Control Equipment
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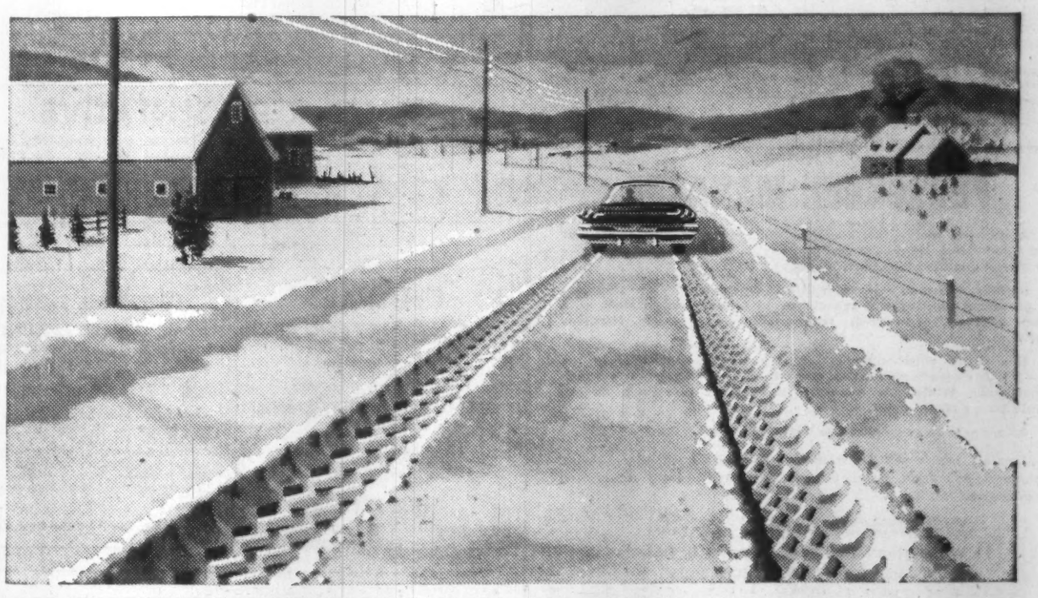
Perhaps the nicest Avis 'extra' is a little extra care

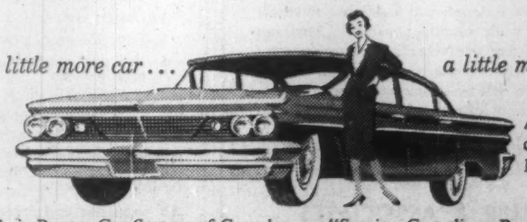


Avis equips every car with Firestone Nylon 500 "Town and Country" snow tires, heavy-duty battery and heater to give you summer-like driving all winter.

Winter business-driving can take you almost anywhere. That's why you need a car that starts at lowest temperatures, gets you through some pretty deep snow and one that keeps you comfortable. You can be sure an Avis car will measure up on every winter-driving count. Each has rugged snow tires, heavy duty battery, heater and freeze-proof automatic windshield washer. They're *standard* on every Avis car. This week and all winter, drive a safe, sure, winterized Avis car.

Avis RENT-a-CAR

a little more car . . . *a little more courtesy*



Avis rents all new cars and features Deluxe Pontiacs

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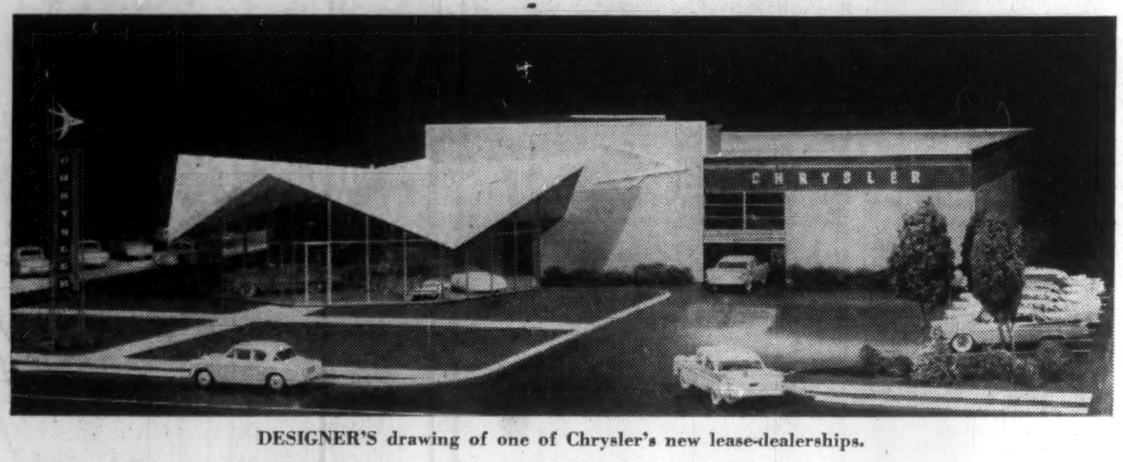


DESIGNER'S drawing of one of Chrysler's new lease-dealerships.

Chrysler of Canada's Lease-Dealerships Plan Part of Big Comeback

By RALPH YOUNG

Fighting to regain and strengthen its position as a vigorously competitive member of the Big Three in automotive manufacturing, **Chrysler Corp. of Canada,** has undertaken a costly venture not yet attempted by any other motor car company:

Large, modernistic dealership premises in our big vehicle marketing centres, the big cities.

This is the most revolutionary part of a five-phase program designed to increase Chrysler's share of the automobile and truck market in Canada.

The others:

● **Infusion of new blood into the management team,** primarily in junior executive positions. Some were brought from the parent corporation in the U. S.; others were hired away from **Ford of Canada** and **General Motors of Canada.**

Objective: To strengthen management in depth.

● **Major rehabilitation of production facilities.** This included commitment to unitized body construction of all of Chrysler's Canadian automobile production, at a cost of many millions.

● **Invasion by the company into truck retailing** by establishment of truck depots at Toronto and Montreal. Simultaneously, the company began production of larger trucks.

● **Expansion of company's parts merchandising facilities** by establishment of warehouses and zone offices in Toronto and Montreal. These are now under construction.

"We're making vigorous efforts to regain the position this corporation once enjoyed in the industry," says Ron W. Todgham, president. "We're doing it by gathering the strongest possible group of men, committing the necessary money, and providing the facilities."

(In 1955 Chrysler made 26% of all passenger cars produced in Canada. In 1959, it made 14%.)

Not only will new dealership buildings be erected when necessary, but the corporation also, through its Dealer Enterprise Plan, is providing capital assistance to dealers, including present dealers who wish to improve and upgrade their facilities.

How and Why they started the dealer plan...

Decision to embark on the building of retail facilities followed an extensive marketing survey in major cities across Canada.

Particular attention was paid to population movements, and developments of centres of purchasing power around the perimeters of the cities. Also studied closely were the ways marketing areas have developed in these suburban centres —some of them doing as much business as a good-sized town. Considerable thought was given to potential growth.

From these studies Chrysler's market planning group plotted the ideal locations for both Chrysler-Plymouth and Dodge-De Soto dealerships, providing each with an area adequate to give profitable volume business. These then were compared to locations of existing Chrysler of Canada retail outlets.

"From there, it was simply a matter of decision to move in and gain proper representation in these lucrative trading areas," says C. O. Hurly, vice-president, sales.

"But today it takes a substantial amount of capital to get into an automobile dealership in a major market. There are good men available to take on these franchises—but not many of them have, or can secure, amounts like $250,000. And, if a building is necessary, both land costs and building costs are substantial, for the type of facilities needed," he adds.

Chrysler already had a Dealer Enterprise Plan to provide capital assistance to dealers in a volume market. This is similar to a General Motors plan.

To this, Chrysler now has added provision of land and a building, leased to the dealer at commercial rental rates.

"We don't subsidize him. He pays an adequate rental. And we only go into this capital expenditure when there is no other suitable building available in the area," Hurly emphasized. "Each of these dealers has the same contractural relationship with us as has any other dealer."

One of the new dealerships, **Capital Dodge-De Soto,** will open for business Feb. 18 at Carling St. and the Queensway in Ottawa. Another has just opened in the Downsview area of Toronto.

Under construction are Chrysler-Plymouth dealership buildings in Ottawa and Regina, and Dodge-De Soto outlets in the Newtonbrook section of Willowdale, Ont., and in Vancouver. Additional buildings are planned for other major centres.

Each dealership features a modernistic six-sided "jewel box", completely glass-enclosed, for display of four to six new vehicles. But principal emphasis is on a large and well-equipped service area to give quick and adequate service to motorists. Ample parking for customers, and for new and used cars, is provided by a minimum of two acres of land with each building.

Total cost, for land and building: $300,000 to $400,000.

The supermarket atmosphere influenced exterior design.

"People are used to bright, clean, airy conditions when they go shopping. We're striving to continue the same atmosphere —to make a woman feel instinctively that she won't have to worry about stepping on a grease spot when she comes to one of these dealerships," Hurly says.

Dealers selected for the new facilities are, without exception, men with a proven record in automobile retailing. J. T. P. Armatage, of Capital Dodge-De Soto, has been with Chrysler of Canada dealerships 30 years, and has operated a Dodge dealership in Renfrew, Ont., since 1945.

Flexibility key word in truck retail plan...

New truck retail centres were established late last year in conjunction with large existing dealerships in Toronto and Montreal, and studies are being made toward placing similar centres in other major cities.

These centres provide a readily available stock of new trucks and parts for dealers throughout Ontario and Quebec.

Main feature of each centre is flexibility. A large variety of conversion material — axle assemblies, transmissions, springs, engines and other items — is available to transform any truck on the floor to meet a customer's specifications, usually within 24 hours. The centre will even paint the truck to his order, if necessary.

"This means that a truck operator no longer has to wait to have his order processed by the factory when he needs a unit in a hurry," says George Orphal, Chrysler's truck sales manager. The large stock of truck parts and component assemblies on hand, also speeds considerably the job of getting a truck repaired and back on the road.

Addition of many new models of heavier trucks to the schedules at the company's truck plant in Windsor last fall, already has paid off in additional heavy truck business. Road transport, construction and other industries in Canada are moving constantly toward use of larger equipment, it was stated.

The heavier units now built in Canada were formerly imported from the parent corporation's plants in the U. S.

Construction of new parts warehouses in Toronto and Montreal, now under way at a cost of about $1 million each, will give faster service to motorists in the two largest vehicle markets in Canada, Mr. Todgham said.

"These plants will have electronic equipment for fast processing of orders, and we'll be able when necessary to get a part on its way, from a complete stock range, within an hour's time," he said.

Todgham emphasized that the parts plant at Chatham still would be the central plant in the dominion-wide distribution system, and would function as a bulk storage plant.

Zone sales offices will be located in the new parts buildings, providing a closer liaison between sales and service divisions.

Today's Fish Industry Science, Big Business On the Sea and Ashore

Here's how a modern fishing empire fights its catch problems afloat and its market problems ashore . . .

By ROY K. COOKE

HALIFAX — Electronics, antibiotic drugs and a flow of marketing ideas are bringing you more fish, fresher and faster.

And you can expect more ideas and more selling than ever before, according to **National Sea Products Ltd.** of Halifax.

National is our East Coast's biggest fish processing firm. Its sprawling operations cover nearly a dozen Nova Scotia and New Brunswick communities. It has 2,000 employees ashore and crews aboard 33 company-operated draggers.

It's a modern marine empire, built on big-business methods and science.

Through various subsidiaries, company has two plants in Halifax, one in Lunenburg, Louisburg, Glace Bay, Lockeport, Digby, Shippegan and Loggieville.

National also owns **40 Fathom Fisheries Inc.,** of Rockland, Me., which operates six draggers.

In addition, company buys thousands of pounds of fish from independent longliner and dragger owners.

Last year company's sales were $23 million, about 40% in U. S., 45% in Canada. Some 15% represented sale of byproducts, such as fertilizer and fish skins, and outfitting draggers through company stores.

National has put science to work afloat and ashore.

In good weather, draggers often work around the clock on the fishing grounds. Trips last five to seven days.

About 30,000 lb. of flake ice is carried in summer months, less in winter, to preserve the catch.

The wheelhouse of a modern dragger has a Buck Rogers atmosphere in which old-time dory-schooner fishermen would feel out of place.

Guesswork is removed with the help of modern electronic gear.

Radio-telephone and echo sounders were used before 1939. Radar, loran, fish finders or fish scopes were developed from wartime naval gear.

Most recent addition is the **Decca** navigational aid.

Like loran, the Decca gear takes cross bearings on high frequency shore transmitters. But Decca also provides an accurate fix within yards.

A typical use, apart from positioning, would be to locate a piece of rock-free bottom that produced a heavy catch last trip.

Echo sounders provide an accurate picture of the depth and type of bottom. Fish scopes with a cathode ray tube locate schools of fish.

Draggers are contacted daily by radio. Frequencies allotted to all fish firms on the coast are 4410 and 2530 kc.

Each contacts its draggers at different times to avoid interference. All discuss catches and weights in code to confuse competitors.

This advance information enables shore plants to work effectively year round and draggers to land catches when ordered.

It helps sales offices to make customer contacts accordingly.

Generally skippers have open orders to fish, but occasionally they have to try for certain types.

In January, for instance, there were unusually heavy catches of cod, so National's crews went fishing on haddock and flounder grounds.

An important advance in recent years has been the introduction of antibiotic drugs. These have extended keeping time of grade one quality fresh fish to 12 days from time of shipment.

In 1956, Canada was the first country to legalize use of antibiotic chlortetracycline (CTC).

Later permission was given for the use of a second antibiotic, oxytetracycline (OTC).

Processors agree there should be heavier advertising to upgrade fish as a consumer product.

Some officials argue this should be an industry-wide venture because all would benefit.

But there's not general agreement so the idea has fallen through.

"National's advertising budget in Canada last year was about $100,000," said W. Stanley Lee of Halifax, the company's general manager.

"It isn't enough but we aren't too sure which is the best way to tackle the program and spend any increase.

"The company is planning more heat-and-eat products and we would like housewives to plan fish meals oftener than once a week."

Part of the problem: Few Canadian housewives cook fish properly.

kets don't like to pay the extra 1c lb. the service costs.

National Sea Products is a wholly owned subsidiary of $11.4 million **Ocean Fisheries Ltd.,** which acquired the interests of R. P. Bell and family at mid-1953.

President and treasurer of both companies is C. J. Morrow, an officer and director of nearly 20 other Maritime companies and a member of the Atlantic Provinces Economic Council.

General manager of both companies is W. Stanley Lee, whose other appointments include chairmanship of the Port of Halifax Commission, vice-chairmanship of the Fisheries Prices Support Board, membership on the Fishermen's Loan Board of Nova Scotia and the directorate of the Fisheries Council of Canada.

In 1959, National handled about 145 million lb. of fish. Ocean Fisheries' net profit for the year ended Aug. 31, 1959, was $636,780 or $1.16 per common share. This was slightly lower than the previous fiscal year's net of $646,519.

Fish Leather

Research has found many uses for fish byproducts, with more on the way.

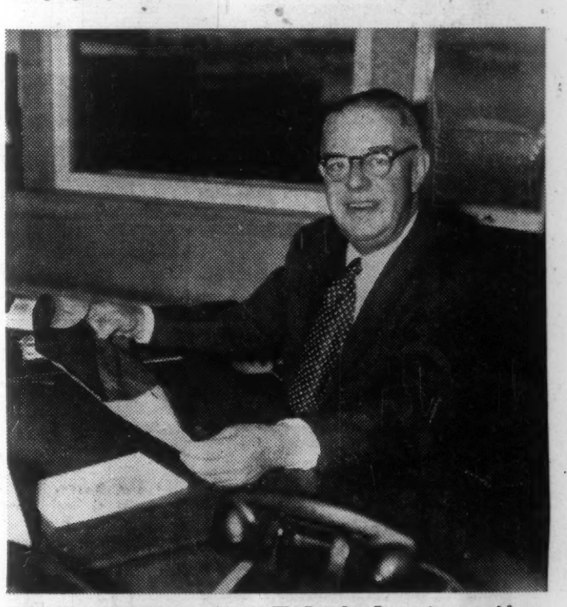
Fish offal is ground and dried for fertilizer.

Fish skins are manufactured into glue.

Herring scales become a pearl lustre for finger nail polish.

Certain species such as catfish have a heavy skin that can be processed as leather for shoes and fashion accessories.

National Sea Products ships these skins to Norway for processing. The "leathers", about 1/16 in. thick, look like alligator hide.



FISH LEATHER for shoes: W. Stanley Lee, vice-president and general manager of National Sea Products Ltd., examines a piece of cat fish leather. It's one of many new fish byproducts in use or under development.

Maritime delicacies such as fish chowder or even cod fish and pork scraps are seldom eaten by inland families.

Five years ago National Sea Products tested three average Ontario communities with increased advertising for six months.

Supermarkets co-operated by stocking bigger displays, but sales were disappointing.

A year ago the federal government instituted a "Canada Inspected" program on all fish so that quality would be improved.

Many fish plants spent thousands of dollars for equipment and remodeling to come under the ruling.

However some supermar-

Bonanza Waiting In Fish Markets

Special Correspondence

HALIFAX — There's a bonanza waiting for the man who can make Canadians eat more fish.

Canadians catch fish, process them, package them, export them — but we just won't eat them, in quantity.

Per capita consumption of fish in Canada runs about 13.5 lb. annually, compared with 37 lb. in the U. K. One big U. K. company has 200 fish shops in the London area alone.

The Atlantic Provinces supply about 3 lb. of fresh and frozen fish per capita. Balance is mostly West Coast salmon, the Great Lakes catch, and shellfish such as lobsters and scallops.

You've got the supply; now make the demand. You'll make yourself rich if you find the answer.

Here are some ideas to help you along:

● **National Sea Products Ltd.,** Halifax, recently introduced a 12-oz. fresh fish vacuum pack for self-service supermarkets. It's date-stamped and guaranteed fresh 10 days after delivery.

● **A frozen sea food dinner** of haddock, halibut, cod and sole packed in a foil wrap complete with sauces has met with only fair success.

Griffith Laboratories of Toronto is now doing research work to package the product in a plastic bag that will be dipped and heated.

Housewives will have a choice of sauces. Retail prices for the 16 oz. package: About 60c.

● **Biggest heat and eat product: Fish sticks,** introduced about five years ago and a top seller now. Every fish firm hopes to find another winner like fish sticks.

● **Big potential** is expected from portion pack for restaurants and institutions, just starting.

Breaded portions (3 oz. or 4 oz. each) of fish are individually wrapped and frozen. Restaurants merely heat and serve when ordered.

There's no waste and operators know exact profit margins.

● **Also in the offing:** A drive to push fishburgers and fish dogs in Canadian drive-in restaurants.

Last summer the **White Tower** chain in the U. S. Midwest handled these items for the first time, using portion pack and fish sticks.

Results were astonishing, with sales of 15,000 lb. of fish a week at the peak.

ask any successful executive . . .

you'll find unsurpassed business facilities

at the fabulous

Seaway HOTEL

call RO 6-4392 for reservations
free parking at the door

Another Seaway Hotel: The Seaway Idlewild at New York's International Airport.

Our Atom Plant Rapped in U.S.

AECL defends its design against low rating assigned in U.S. comparison of 10 types of reactor . . .

The heavy water moderated nuclear power plant — the design chosen for Canada's first atomic energy plants — came off poorly in a multiple-volume study comparing 10 reactor types released this week by the U.S. Atomic Energy Commission.

Officials of the crown corporation, **Atomic Energy of Canada Ltd.**, were quick to defend their design concept, however.

Economic and technical factors reversed the picture for Canada's first full scale nuclear power plant, the Douglas Point station on Lake Huron, according to John Foster, manager of the project.

Foster said he did not put much stock in the kind of estimates and comparisons made in the four-part study.

The report itself states:

"It is impossible to accurately predict the ultimate performance and cost of any power reactor concept at this stage of development of the technology."

Yet undoubtedly the report will be fuel for several years for debates among engineers and politicians as to the economic advantages of one reactor system over another.

Three volumes of the four-part study, entitled the "Civilian Power Reactor Program," were released this week.

They deal with the technical and economic status and potential of civilian nuclear power reactors, and plans for future development.

A comparison of the economic potential of nine different types of reactors puts the heavy water moderated reactor in eighth place, trailed only by an aqueous homogeneous type, a comparatively undeveloped concept.

Potential power cost of a heavy water moderated reactor is estimated at 8.2 mills per kilowatt hour.

This is broken down to fixed charges, 5.8 mi/kw hr.; fuel cycle cost, 1.21 mi/kw hr.; operation and maintenance, 9.1 mi/kw hr.; and insurance, .28 mi/kw hr.

AECL has been shooting for a five mill rate to make nuclear power competitive with coal-fired stations in southern Ontario.

Foster pointed out several discrepancies between cost factors quoted in the U.S. study and plans for the 200,000 kw station on Lake Huron.

• **The U.S. study** places fixed charges on capital at 14%. AECL is figuring on half that since the $60 million Douglas Point station will be publicly financed, meaning lower interest rates, no income tax or profits.

• **Fuel costs** are expected to be lower than in the U.S. study.

Fuel fabrication cost is estimated at $50 a kilogram in the U.S. study, while AECL is actually paying $25 kg. for natural uranium oxide.

• **Douglas Point is expected to have** a much greater fuel burn-up than the U.S. study anticipates.

The U.S. study talks of fuel burn-ups of 7,000 megawatt-days per metric ton by 1963, while AECL figures on a 9,000 burn-up when its plant goes into operation in late 1964 or 1965.

• **AECL hopes for an efficiency of 29%** at its Douglas Point station, compared with a 26% efficiency anticipated in the U.S. study.

Despite the low place given the heavy water system on the reactor type totem, the report recommends an enormous expansion of research and development and plant construction in this field.

For the fiscal years 1950 to 1959, only $8.2 million of a total $667.8 million spent on the U.S. civilian power reactor program was spent on the heavy water system.

Through 1970, an additional investment of $283 million is required for a heavy water reactor program, the report states.

The program suggested envisages evaluation studies starting in July, several research and development projects beginning at the same time, start on construction of a prototype at the same time, another prototype in 1962 and a large plant in 1965.

"Heavy water moderated natural uranium fueled reactors have a number of unique advantages," the report states.

"For example, they eliminate dependence upon diffusion plants in the fuel cycle, they have high neutron economy, and they require relatively small quantities of uranium ore per unit of power produced.

"On the other hand, these reactors are physically large with consequent high capital costs.

"The reactivity lifetime of the natural uranium fuel is more limited than that of enriched uranium fuel."

The report states that the U.S. program will use pertinent information from other countries "to the fullest extent" and that an expanded program for co-operation with Canada in the development of heavy water reactors is expected.

Thorncliffe Park Ltd. May Issue More Stock

Additional equity financing will probably be required by **Thorncliffe Park Ltd.**, President D. Hubert Cox said in a progress report to shareholders this week.

Financing would be used to complete medium rise apartment buildings, to finance high rise apartments, and for commercial and industrial development.

Thorncliffe Park is an integrated realty development on a 400-acre site in Leaside, Metropolitan Toronto.

Last December's increase in NHA mortgage rate from 6% to 6¾% made it certain that mortgage money would be available this year for NHA loans, Mr. Cox said.

"Negotiations to obtain such funds are currently being pursued by the company with the possibility of excellent results," he said.

Six of the development's 21 medium rise apartment buildings, with 1,451 apartments, will be owned by Thorncliffe Park Ltd.

Four, containing 282 apartments, will be completed shortly, financed by conventional mortgages totaling $1,840,000. The other two, with 136 apartments, will be completed this year with NHA mortgages of about $1,050,000.

Company is negotiating for NHA mortgages on four 18-story buildings of 216 apartments each, instead of the three high-rise apartment buildings originally planned.

Leasing of stores in Thorncliffe Market Place (FP, Dec. 12) is "progressing rapidly", the president said.

Some 100,000 sq. ft. of stores will be completed in time for this year's Christmas shopping season.

A department store is scheduled to be completed by September, 1961. "Negotiations are now in progress with several firms for a long-term lease on this store," Mr. Cox said.

Company estimates that completion of its building program will produce net rentals of $205,000 in 1960 and $730,000 in 1961, after all building operating costs and mortgage interests.

See Record Year In Rubber Usage

The percentage of synthetic rubber to total new rubber consumed in Canada continues to rise.

In 1959 the proportion was 56.13%, up from 54.95% the previous year. It is expected to rise further this year to a 57.15% proportion.

Most of the synthetic rubber is supplied by the **Polymer Corp.**, Sarnia, Ont.

Members of the Rubber Association of Canada, who account for about 90% of total new rubber consumption, processed 92,371 long tons in 1959, an increase of 20.5% over the previous year and 10.3% over 1956, the previous record year.

Rubber association members anticipate a further increase in rubber consumption of 5.5% this year to 97,412 long tons.

1959 Imports Of U.K. Wool Highest Ever

MONTREAL (Staff) — Imports of U. K. wool cloth into Canada in 1959 were substantially higher than in the previous year.

According to the Canadian Woollen and Knit Goods Manufacturers' Association, U. K. imports last year totaled 19,057,000 sq. yd., up 6.2% or 1,113,000 sq. yd. from 17,944,000 sq. yd. in 1958.

The CWKGMA notes the increase was in both wooller and worsted fabric.

Despite higher imports, most domestic mills fared better in 1959 than they have in the past several years.

Due largely to a fashion trend toward wool in the past two seasons, apparent Canadian wool fabric consumption has been on the upswing.

A second factor is that closure of a number of wool textile mills in the past several years has meant more business to be shared by those that remain.

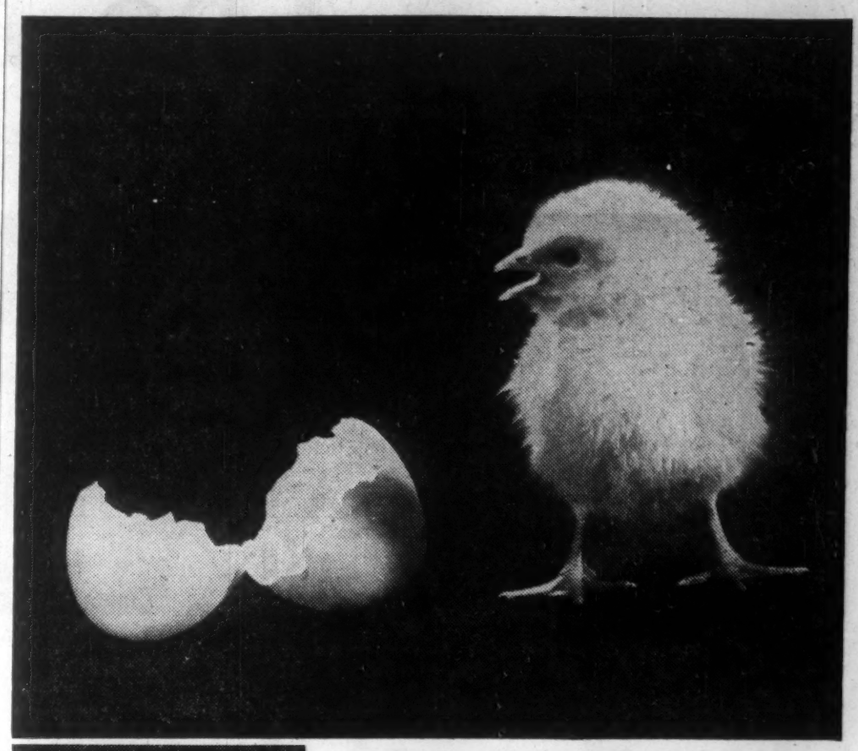
New York Office For U.K. Industry

A U. K. Industrial Development Office is to be opened in New York this month by the British Board of Trade. It will provide U. S. manufacturers with information about the opportunities for setting up plants in the United Kingdom.

U. S. manufacturers seeking to expand abroad made almost 800 proposals to manufacture in Britain in 1959. By the end of last year U. S. business investment in the U. K. amounted to over $2,000 million.

The new office will be established in the British Consulate General in New York, 99 Park Ave. A. Currall, an assistant secretary of the Board of Trade will be in charge.

The Northern Ireland government, which already maintains an office in New York, will co-operate in the new arrangement.



Night loading: from interior docks, is one of many Laidlaw innovations to ensure on time delivery.

Just big enough

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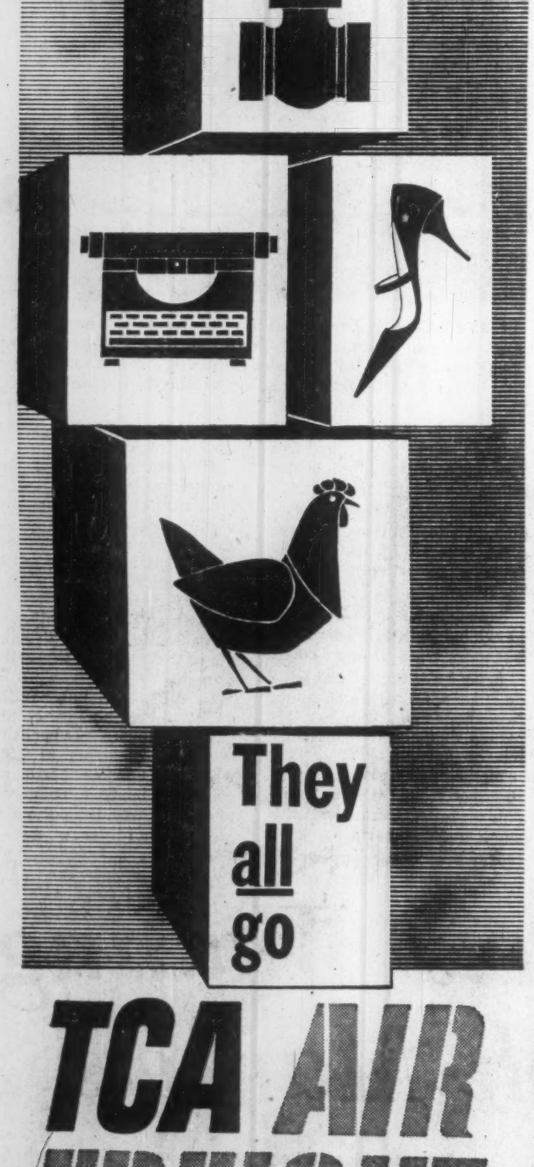

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THE CONTINENTAL LIFE
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A Record Year

Reports A Record Year of Expansion

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Chairman of the Board

John H. Burgar
President

Herbert Pilling
Vice-President and Managing Director

- 53% Increase In 1959 New Sales *(more than 6 times the industry gain)*
- Assets Reached A Record Total
- Investment Yield A 25 Year High
- 60% Increase In Dividends To Policyholders

12 New Management Appointments
12 New Supervisory Appointments

Insurance In Force	$208,221,553
Total Assets	42,621,464
Surplus and Special Reserves	3,798,889
Benefit Payments	2,355,026

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John H. Burgar, Toronto — A. S. Mathers, B.A.Sc., Toronto — John W. Medland, Toronto
James Hunter, Toronto — Kenneth I. Litster, Toronto — Neville Pilling, Chicago
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W. Leo Knowlton, Q.C., Toronto — Herbert Pilling, Toronto

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What the Man Said:

Let's stop 'loss-leader' abuse, misleading advertising and combinations to the public detriment . . .

W. H. EVANS, president of the Canadian Manufacturers' Association, speaking to the Rotary Club of Toronto:

* * *

Any proposed federal legislation to amend the Combines Investigation Act should cover "loss-leader" abuse, misleading advertising and combinations to the public detriment.

It has to be admitted that, despite all the lessons of the past, many consumers are still highly gullible and easy prey for the predatory wolves and get-rich-quick sharks who appear to be offering their wares at what looks to be extraordinary savings.

One dodge is the false mark-up, whereby the regular price of an item is advertised at greatly in excess of what it is as a means of pointing up the supposedly tremendous saving that can be made by buying at the sale price — the sale price being hardly less than the true original price.

Realizing that their normal practices do not delude as many people as they used to, these dealers have of late increasingly been enlisting branded products of national repute to provide a front of respectability for their activities.

These they flamboyantly advertise at cut-rate—and sometimes below cost—prices in the full knowledge that in so doing they will appeal to both the curiosity and cupidity of bargain hunters while simultaneously allaying their suspicion.

Obnoxious as this sort of thing is to both the fair-dealing retailer and the manufacturer whose high quality product is being abused in this way, as the law now stands there is nothing they can do about it.

We have legitimized—I might even say sanctified—this kind of "gimmick" trading which is in practice no more beneficial to the public than it is to the manufacturer and reputable retailer.

And since it is certainly not in the manufacturer's interest to see his products disparaged, you may think it very curious indeed that our existing laws should require him to supply even those traders who may sell them in such a way as to injure both the prestige of the manufacturer and the livelihood of decent merchants.

But such, unfortunately, is the case.

Those who mistakenly defend this state of affairs do so on the grounds that anything tending to lessen competition is against the public interest, but the hollowness of this argument, I suggest, has become increasingly apparent to thinking Canadians in the last few years.

On the evidence, then, the Combines Investigation Act is clearly in need of revision—and I should like to add parenthetically that such an act, appropriately amended, has indeed a useful place on our statute books.

Ottawa, seemingly, now recognizes this need of revision and proposes to amend the act during the present session of Parliament.

There is another area of the Combines Investigation Act that cries out for amendment.

Under the existing law, the government does not have to prove that any public injury whatsoever has followed from competitor co-operation.

On the basis of a Supreme Court of Canada ruling in a recent case, any business arrangement resulting in a reduction in competition in an industry constitutes an illegal combine.

Whether, from the public standpoint, the consequences of such an arrangement are good or bad is immaterial.

Industry - wide arrangements to pool research facilities and exchange research data, thereby avoiding much costly duplication of effort, can hardly be deemed harmful in themselves.

But the existing law, in creating doubt as to the legality of many forms of competitor co-operation, regardless of whether they have a good or bad effect from the public standpoint, has, in effect, been guilty of "throwing out the baby with the bath water".

This is hardly a desirable state of affairs and should be remedied.

Japanese Pump Manufacturer Looks at Saskatchewan Plant

From Our Own Correspondent

REGINA — If Saskatchewan can stand up to economic scrutiny by a Japanese pump manufacturer, it may get another new industry.

Possible first investment: $250,000.

A representative of **Ebara Manufacturing Co.,** Tokyo, is taking a look.

He's Hideji Matsubara, director of Ebara's business department. With him is Noburu Imai of the **Kawakami Trading Co.,** Tokyo.

Ebara supplies about 65% of all pumps sold in Japan. In its two plants near Tokyo it employs about 1,600.

In sizing up the possibility of establishing a plant in Saskatchewan, Matsubara will study the availability of raw materials, supply of labor, costs of transportation, fuel and power, and suitable locations.

Considered most likely for location: Regina, Saskatoon or Moose Jaw.

Ebara has in mind the production of small pumps, with later expansion into small electric motors.

The company has, in Japan, a fairly wide range of these products, plus compressors, gas meters and sewage disposal equipment.

The company is interested in the Saskatchewan government's plans for farm improvement and eventual irrigation of land in the district that will be supplied by the South Saskatchewan dam.

At first, Ebara considered locating an assembly plant in the province.

Now, however, it is thinking in terms of undertaking all phases of production, including castings.

This would eliminate such problems as freight costs and tariffs on parts shipped from Japan.

One stubborn difficulty in the way of the project, the company says, would be a supply of technical labor.

It believes it would have to bring in its own technicians to set up the plant and get production started.

Some of these would have to remain as supervisors.

A recent statement by Immigration Minister Fairclough indicates, the company believes, that there would be no restriction on the import of labor for this purpose.

NEW COPYING MACHINE

Charles Bruning Co. (Canada), Toronto, has a new model copying machine that copies translucent and opaque originals at a cost of about 1¼c a copy. The table-top machine features automatic separation of copies from originals before delivery.

Start Work Soon On Grand Rapids

From Our Own Correspondent

WINNIPEG — Manitoba Hydro Electric Board will start construction soon on a $140 million power plant at Grand Rapids at mouth of the Saskatchewan River.

Money for first stages of the construction will be voted by the legislature at its current session, which opened this week.

The site is 250 mi. northwest of Winnipeg. The plant is to be completed in five years (**FP,** Oct. 17, 1959).

The work is scheduled so that initial generation and transmission of power to southern Manitoba will be possible by fall of 1964 if electrical needs of the province require it.

The plant is being designed for four units each with a potential of 110,000 hp, a total of 440,000 hp.

Some preliminary work has already been done.

At the 1959 session $450,000 was voted for exploration and test work on which crews worked during the summer.

They will be back on the location in March and expect to have the initial testing completed by July.

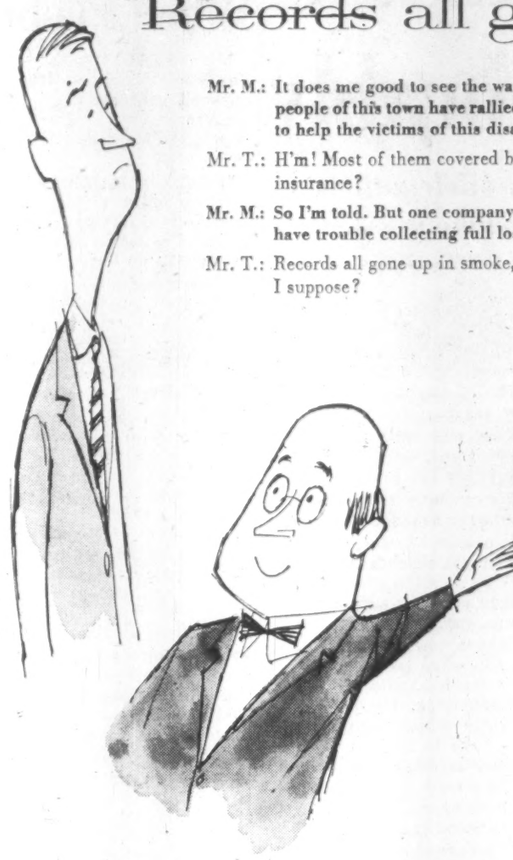
Part of the work early this year will be continuation of water pressure tests to establish capacity of the rock to hold water.

The Grand Rapids development will not delay work on the $30 million thermal station at Selkirk where two units each of 88,000 hp capacity are under construction.

One will be completed by June, the other by late October.

Mr. M. and Mr. T. Dialogues. No. IV

"Business Records all gone up in smoke"



Mr. M.: It does me good to see the way the people of this town have rallied round to help the victims of this disaster.

Mr. T.: H'm! Most of them covered by insurance?

Mr. M.: So I'm told. But one company may have trouble collecting full loss.

Mr. T.: Records all gone up in smoke, I suppose?

Mr. M.: Yes . . . every last one . . . he kept them locked up in his desk.

Mr. T.: And I don't have to tell you, Mr. M., that 43% of businesses which lose their records in a fire NEVER start up again.

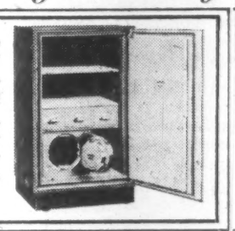
Mr. M.: That's bad! However, another company had just installed a record safe with a money safe inside. The firemen found it among the ashes in the basement, two floors below where it stood. And when it was opened there were the records and $497 in paper money as good as new. It made me feel good to read about it.

Mr. T.: He should thank his foresight and the salesman who sold him that Mosler-Taylor Safe.

Mosler-Taylor for safety's sake

Canada's largest manufacturer of Security Equipment

This Record Safe has qualified for the Canadian Underwriters' Laboratory "C" Label. That is to say it will stand temperatures up to 1750° for one hour, as well as passing drop and explosion tests. Anchored in it is a burglar resistive money safe bringing low insurance premiums. For full details on Mosler-Taylor fire-resistive equipment send in the coupon.



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"A new concept in Record Protection"

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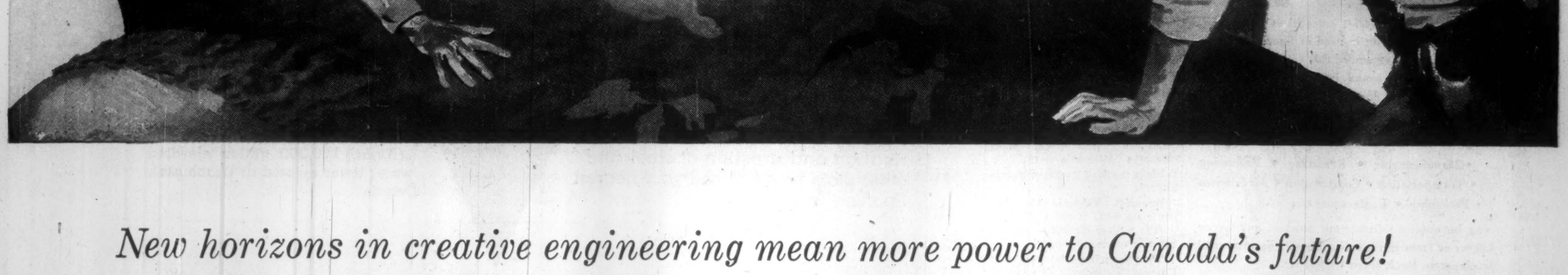

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Above and beyond specific, individual problems, GM Diesel is continuing a ceaseless probing into new fields. Through its Project Engineering Group, GM Diesel constantly looks for new applications of Diesel power, new ways to improve efficiency in existing systems, entire new concepts of power and transportation engineering.

GM Diesel's Project Engineers form a unique, Canadian-trained group. Through their efforts, the firm has, in recent years, taken the leadership in such wide fields as Diesel-electric locomotive design and Diesel-powered generating equipment.

The creative engineering of the Project Group is the core from which the whole GM Diesel organization has evolved its power and transportation philosophy. In this philosophy—an attitude of mind ever receptive to new ideas, new concepts—the sky's no limit!

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ANNOUNCEMENT

P. F. A. PRANCE

Appointment of P. F. A. Prance, a graduate of the University of Saskatchewan, to the board of directors and the executive committee of Ford Motor Company of Canada, Limited is announced. Mr. Prance, who was born in England, has been an executive with Ford Motor Company's International Division since 1949. He is also a graduate of Harvard University. He succeeds Tom Lilley, vice-president staff, Ford International, who has resigned from the Ford of Canada board in order to direct new management assignments.

SOUTHAM DIVIDEND

Dividends paid by **Southam Co.** in 1959 totaled $2.85, including one special tax-free distribution of 45c. It was incorrectly stated in **FP**, Feb. 13, that two tax-free payments were made.

Columbia Talks Open Favorably

It seems that both delegations expect to reach agreement . . .

OTTAWA (Staff) — Negotiations with the U. S. for a treaty about co-operative development of the Columbia River started favorably, in the Canadian view.

They occupied two days of talks between a Canadian delegation, led by Justice Minister Fulton, and a U. S. delegation, led by Elmer F. Bennett, Under-Secretary of the Interior.

Neither delegation, in one sense, did much more than to feel out the ground.

But they both were convinced that the other side seriously intends, and expects, to reach agreement.

Both delegations, also, feel they have plenty of work to do before their next meeting in Washington on March 4 and 5.

A technical meeting of engineers and waterpower experts will be held a couple of days earlier.

For both sides to believe that the other wants to reach agreement on the basis of the "principles" set out by the International Joint Commission (**FP**, Jan. 23), is a great step forward from all previous inter-governmental negotiations.

In some points the IJC's principles are far clearer to the engineers on both sides than they can be to anyone else.

They are based on detailed mathematical calculations, some of which were explained in **FP** (Jan. 23).

On some other points, the IJC principles deliberately leave room for different interpretations.

The negotiating teams have now reached this position:

They will not try to write a detailed and agreed interpretation of the IJC principles.

They simply accept them as a basis for negotiation.

It is only when differences of interpretation appear that they will try to settle the differences and produce an agreed view.

The difficulty on both sides is to decide how much it is necessary to write into a treaty, and how much should be left for settlement by the federal authorities which both countries will have to appoint to implement the plan for Columbia development.

In its very simplest form, the treaty need say only:

"The governments of Canada and the U. S. agree to the joint development of the Columbia River on the basis of the principles recommended by the International Joint Commission."

But that certainly would not be enough for Canada, and it probably would not be acceptable to the U. S. either.

On the other hand it is impossible to write a treaty in such detail that it will cover every possible action by the agencies of either country throughout the period of co-operative Columbia development.

The Canadian delegation will try to get the most vital features of the IJC principles (such as the 50% share of downstream benefits, compensation for flood relief, credit for the most economic projects, etc.), written into the treaty.

The U. S. delegation will have other points which it thinks it is vital to include.

Practical implementation of these points will have to be left to the daily operations of practical working bodies.

But each country wants to have its vital interests spelled out in treaty form so as to give them the most solemn and binding force.

As the issues are joined, neither side is prepared to guess at a timetable.

Both governments say they want to complete their agreement as soon as possible.

But, if it isn't in time for the 1960 session of Congress, then it will just have to wait until 1961, they say.

The Canadan delegation consists of:

Justice Minister Fulton; Gordon Robertson, Deputy Minister of Northern Affairs and National Resources; A. E. Ritchie, now Assistant Under-Secretary of State for External Affairs and until recently commercial minister and charge d'affaires at the Canadian embassy in Washington; and E. Bassett, Deputy Minister of Lands and Forests for B. C.

Stand By for Coal Furor When Probe Travels East

MONTREAL (Staff) — The Royal Commission on Coal likely won't generate much public excitement until it opens hearings in the Maritimes (**FP**, Feb. 13).

There, coal is such a big factor that any weaknesses in the industry bring widespread repercussions. Often there is nothing to take up the slack.

Such is not the case in many other Canadian coal-producing areas.

Example:

Until 1952 Estevan, Sask., depended largely on coal for its existence.

Today with oil and gas displacing a million tons of lignite coal a year, Estevan is the centre of a major oil and gas development area.

Producers of Saskatchewan's commercial coal are nonetheless worried by erosion of their traditional markets.

Here are some of their recommendations to the commission:

- **Help for the industry** should take into account that "natural gas is a premium fuel not likely to be available for any long time in the industrial market."
- **Recognize that the present method of dealing with requests** for freight rate increases gives no opportunity "for the proper consideration of the competitive position" of the hard-pressed lignite coal industry.

The producers urged that if freight rates on coal cannot be based "on a reasonable and proper scale", subventions should be more flexible.

Brief was submitted by **Great West Coal Co.** and its subsidiaries (**Old Mac Coal Ltd.** and **Western Dominion Coal Mines Ltd.**) and **Manitoba & Western Coal Co.**

Loss of domestic markets to fuel oil and natural gas has been met in recent years by vigorous development of industrial markets.

Outlook:

- **Domestic markets** will continue to decline.
- **Immediate potential** of the industrial market has been fairly well exhausted.
- **Coal for thermal generation** of electricity seems to offer the best hope for additional tonnage but development is at least five years away.

Producers estimate their market losses to oil at 179,575 tons annually in Winnipeg and 154,000 tons annually in Regina.

Losses in Moose Jaw, Yorkton and Brandon total 100,000 tons.

Recently 605,000 tons have been lost to gas.

Included among lost customers is the Estevan plant of the **Saskatchewan Power Corp.**, which has substantial interests in gas development and transmission; **Ontario & Minnesota Paper Co.**, Kenora; **Dryden Pulp & Paper Co.**, Dryden; and the Saskatchewan Mental Hospital, Weyburn.

This week the commission, headed by Hon. Ivan C. Rand, dean of the University of Western Ontario Law School and former member of the Supreme Court, met in Toronto.

A ROAD TO RESOURCES

Here's one example of the federal-provincial co-operative "roads to resources" program. It is a stretch of the Plaster Rock-Renous Highway, cutting through New Brunswick's hinterland and opening a new east to west thoroughfare. New Brunswick's projects cover roads to the forests, mines, sport fishing, hunting, and tourist attractions.

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Richard Palmer, Deputy Minister

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Regina	1874 Scarth Street
Winnipeg	195 Portage Ave. East
Toronto	250 University Ave.
London	291 Dundas St.
Montreal	901 Victoria Square
Quebec	955 Chemin St. Louis
Saint John	35 Charlotte St.
Halifax	65 Spring Garden Road

New Twist: Tobacco-Tip Cigarettes

MONTREAL (Staff)—A new brand was thrown into the complex filter-versus-plain cigarette battle this week.

It's a sort of "tasting man's filter."

Imperial Tobacco Co. has come up with "Gold Crest."

It is a filter cigarette, but the filter is made of tobacco.

This, says Imperial President Edward C. Wood, allows the smoker the advantages of better flavor while retaining the real or imagined advantages of a filter-tipped cigarette.

The new brand was introduced at selected outlets in Montreal, Toronto, Vancouver and Ottawa.

Price is 2c over the standard for a package of 20.

This is the first cigarette of its kind anywhere in the world.

Imperial has been experimenting with it for four years. Patents are pending on the process.

The new all-tobacco filter, says Imperial, allows use of high quality tobacco.

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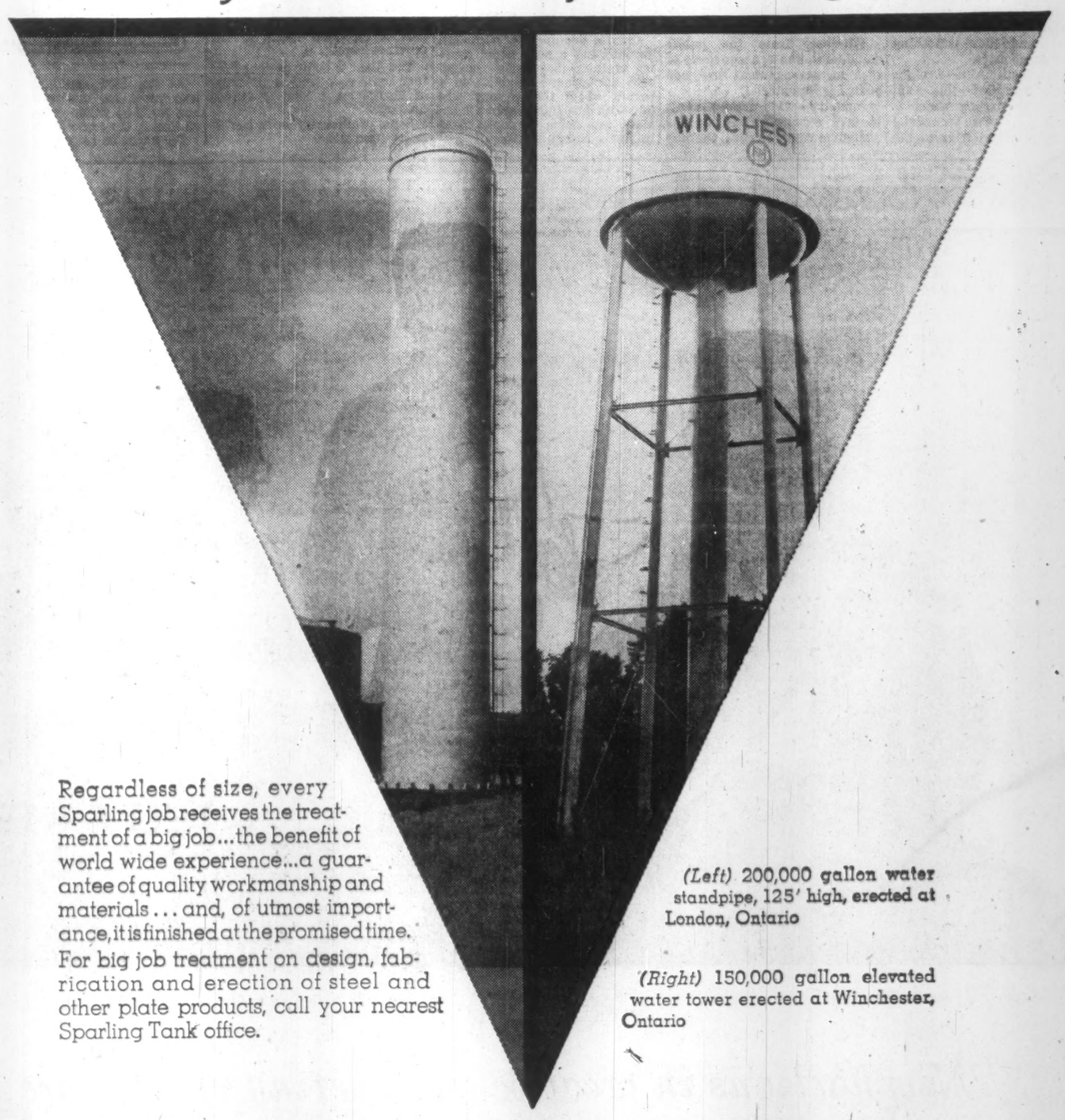

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(Left) 200,000 gallon water standpipe, 125' high, erected at London, Ontario

(Right) 150,000 gallon elevated water tower erected at Winchester, Ontario

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Parliament's Business

By FP's OTTAWA STAFF

Rise of an Able Debater

CARDIN was a great name in Quebec political circles, back in the Liberal heyday. Now there is another Cardin among the abbreviated Liberal ranks in the House and as he approaches his 41st birthday, he is gaining stature as one of the Liberals' brightest hopes from the province of Quebec.

To him was assigned this week the task of re-opening the debate on external affairs which occupied the House for two days last week. He spoke in English, and his speech had clearly been prepared very carefully. But it was the best debating speech the House has heard for some time.

A few samples:

• **For once he carried the continual subdued bickering between the Liberals and the CCF into the CCF camp.** He described Harold Winch, the CCF spokesman in the earlier part of the debate, as following familiar CCF tactics — "playing both ends against the middle in a frantic and desperate effort to keep its rapidly fading face from disappearing completely from Canada's political picture."

"May I tell the honorable member," he said, "that I personally have felt that, in the House and throughout the country, we have need of socialism about as much as we have need of the dodo bird with red eyes as our national emblem?"

• **Then he spoke of the introductory speech made by Howard Green, as Secretary of State for External Affairs,** in which Mr. Green asked for a "free-swinging" and frank debate. "His own speech," said Mr. Cardin, "was carefully planned and calculated, as colorless and neutral and non-controversial as possible. Its subject matter can be found in any elementary brochure on the Department of External Affairs, or NATO or the United Nations."

Having apparently scored a point, yet without persuading anybody that Mr. Green had done the wrong thing, Mr. Cardin added: "I feel that the minister was very wise, as he usually is, in making the type of speech he did make and not speaking off-the-cuff" . . . (then, in the same sentence, came the debater's ending) . . . "as he pretended to."

• **But all this was a preparation for the main attack** Mr. Cardin was to make for the Liberal party, and which everybody in the House expected. The substance of foreign policy decisions had been lost over the weekend in backroom discussions about Mr. Diefenbaker's intervention on the heels of Mr. Green.

In the first day of debate on foreign affairs both Mr. Pearson and Mr. Martin, for the Liberals, had asked Mr. Green to tell the House what proposals for disarmament Canada had put before the Western Powers now preparing for a disarmament meeting with the Russians and four of their satellite governments.

Mr. Green had declined to reveal them. And there had been a fierce argument over his refusal. So staunch a Conservative as Calgary's Arthur Smith (son of a former and much loved Calgary Conservative of the same name) had delivered a powerful speech supporting Mr. Green's argument that it would be most improper to reveal what Canada was proposing in secret western talks.

Then, the following day, Mr. Diefenbaker described to the House of Commons what Canada's point of view was. He detailed it, point by point, and Washington reports have hailed the revelation as helping to drive the U. S. government to a definition of its attitude.

In Mr. Cardin's eyes, however, Mr. Diefenbaker had merely shown Canadians that "there is no cabinet solidarity". They had seen, he said, "one of the most conscientious, sincere and hardworking ministers needlessly repudiated and unjustifiably humiliated."

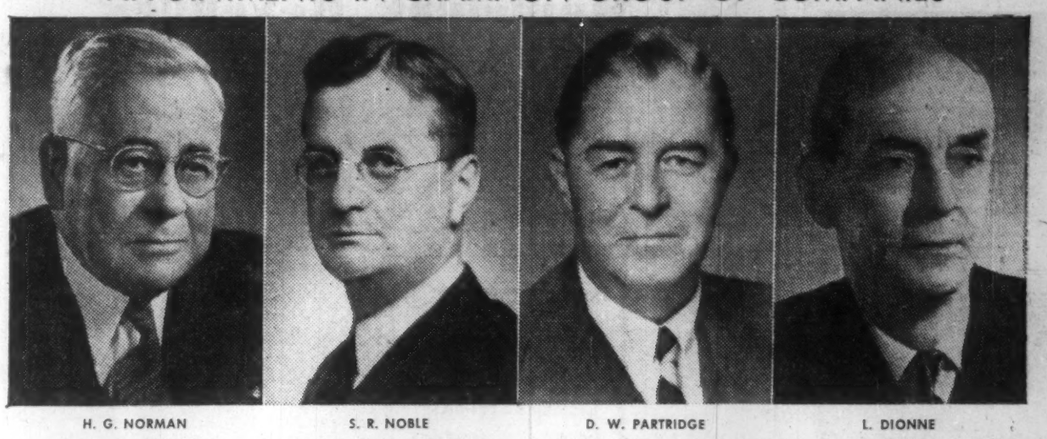
"I do not feel very humiliated," said Mr. Green.

"I can understand the minister, and I will not make any comment," said Mr. Cardin, "but does the Prime Minister really think that, by repudiating him, he is helping his colleagues to maintain the prestige and authority necessary to . . .?"

Unfortunately Mr. Diefenbaker, who is also an excellent debater, was not in the House for Mr. Cardin's speech, but the emergence of any really vigorous and able debater is rare enough in the Canadian House of Commons that it deserves to be noted. And, whether his strictures on Mr. Diefenbaker were justified or not, they were well stated.

ANNOUNCEMENT

APPOINTMENTS IN CHAMPION GROUP OF COMPANIES



H. G. NORMAN — S. R. NOBLE — D. W. PARTRIDGE — L. DIONNE

Lloyd R. Champion announces the following appointments. H. G. Norman, C.M.G., C.A., is appointed Chairman and Director of Champion Savings Corporation Limited, Prudential Trust Company Limited, Champion Mutual Fund of Canada Ltd., and Champion and Company Limited. Mr. Norman was President of the Montreal Stock Exchange and the Canadian Stock Exchange until November 1, 1959. He is past President of the Society of Chartered Accountants of the Province of Quebec. He saw diplomatic service, first as Ambassador to Venezuela and then as Consul General in New York, after many years as resident partner of Price, Waterhouse & Co., chartered accountants, and serving in a senior financial capacity with the Canadian Government during World War II.

S. R. Noble, O.B.E., LL.D., becomes President and Director of Champion Mutual Fund of Canada Ltd., Vice-President and Director of Champion Savings Corporation Limited, of Prudential Trust Company Limited, and of Champion and Company Limited. Mr. Noble's financial career began with The Royal Bank of Canada at Fredericton, N.B., rising to the post of Assistant General Manager. During World War II he was given leave by The Royal Bank to assist the Canadian Government as special advisor to the Wartime Prices and Trade Board. He organized the Commodity Prices Stabilization Corporation for the Government. On October 1, 1944, he resigned from various Government positions and from the staff of The Royal Bank to establish The Industrial Development Bank, of which he was General Manager until October 1, 1955. He is presently a Director of several Companies and President of Julius Richardson Convalescent Hospital.

D. W. Partridge becomes Vice-President and Director of Champion Mutual Fund of Canada Ltd., of Champion and Company Limited, and of Champion Savings Corporation Limited, and Director of Prudential Trust Company Limited. Mr. Partridge was President of Canadian Alliance Securities Ltd., the business of which was taken over by Jackson, McFadyen Securities Limited. He is a Vice-President of the latter company. From 1940 to 1945 he was Chairman of the Group Payroll Section, National War Finance Committee for the Province of Quebec. He is Founder and was formerly President of Commonwealth International Corporation Limited and Leverage Fund of Canada.

Ludger Dionne is appointed Vice-President and Director of Champion Savings Corporation Limited, and Director of Champion Mutual Fund of Canada Ltd., of Champion and Company Limited, and of Prudential Trust Company Limited. Mr. Dionne, well known Quebec Industrialist, is associated with many successful enterprises. He is a partner in the firm of V. Dionne et Fils Ltée; he founded the St. George Shoe Company, the Dionne Spinning Mills Co., and Dionne Veneer Mills. Elected a Member of Parliament in Ottawa, he represented the Constituency of Beauce from 1945 to 1949 and served on many Government Committees.

Lloyd R. Champion continues as President and Managing Director of all companies in the Champion group, excepting Champion Mutual Fund of Canada Ltd., of which he is Executive Vice-President.

Bennett Says PGE Made $1 Million

From Our Own Correspondent

VICTORIA — B.C.'s government railway, **Pacific Great Eastern,** is booming, Premier Bennett told the legislature in his budget address.

"After appropriate allowances were made for capital depreciation and interest, a net profit in excess of $1 million was recorded last year," he said.

Extensions of the line a few years ago into the Peace River country, had resulted in substantial increases in revenue, he said.

An issue last September of 'parity' development bonds to fund outstanding short-term notes of the railway had been well received.

"Although the original selling authority involved $10 million only, the unprecedented demand for the bonds required first an increase to $20 million, then an increase to $30 million, and, finally, an increase to $35 million to satisfy demand," he said.

More money will be necessary to develop the PGE and the legislature will be asked this session to increase the limit of the railway's borrowing power by $20 million.

NEW REFRIGERATOR

A glide-out centre drawer that houses the meat-keeper and vegetable crisper is a feature of a new refrigerator - freezer combination to be introduced this month at **Canadian Westinghouse Co.** distributor shows. The 14 cu. ft. model is frost free and has separate controls for each compartment.

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Record B.C. Budget Hints Bennett Election-Minded

By JAMES K. NESBITT

VICTORIA — Premier Bennett's 1960 budget seems to have been shaped with an election in mind.

The $331 million budget is the highest yet — up by $31 million over last year's — and promises more money for many more people.

With an eye to an election this year or next, Bennett has brought in no new taxes, made no provision for borrowings.

He said it is the first debt-free budget since 1874.

Critics say the government is permitting various board and commissions to pile up debt for which the government, in the long run is responsible.

Bennett says his government has saved $56 million in debt charges and interest.

Here is where some of the increased spending will go:

• **The home-owners' grant** has been increased from $28 a year to $50 — for an additional $6 million, making the annual total more than $13 million.

If you live in your own home in B. C., and don't take in tenants you now get back $50 a year on your taxes.

• **People on old-age pensions,** blind pensions, social welfare and mothers' allowances will get 20% more—about $4 or $5 a month.

• **On highways, roads and bridges,** the government will, in the coming year, spend $84 million — up from $48 million in the current fiscal year.

• **Government aid to schools** will jump to $56 million — from $45 million. Grants to universities, colleges and normal schools will go to $10,768,000, from $6.5 million.

In the last fiscal year, ended March 31, 1959, the premier said, the aggregate of revenue collected was $289,009,075, and the total spent on current services was $227,424,511.

A current account surplus of $61,584,564, therefore, accrued.

That surplus was used, in part, to provide $40,961,103 for projects of a capital nature; $12 million for supplementary debt redemption and $89,699 for miscellaneous purposes, leaving a net revenue surplus of $8,533,762, which, when added to the balance of revenue surplus subject to appropriation, raised that total to $21,510,482, at March 31, 1959.

Looking ahead, the premier said:

"The general outlook for 1960 is prosperity, with a dash of caution.

"We anticipate appreciable gains in production and in the value of sales.

"The forest industry should experience a satisfactory year.

"The iron and steel segments of our industries anticipate a marked upswing from recession lows.

"Utilities confidently expect a substantial growth in revenues."

NEW CARGO LINER

Seven new express cargo ships under construction in the U. S. for **Moore-McCormack Lines** have been planned with the possibility of Great Lakes operation in mind, and thus are equipped with "rubbing bars" on each side and special gear. First of the cargo liners was launched this week at Chester, Pa.

IN 1959: ONE BILLION DOLLARS

RECORD AMOUNT OF NEW INSURANCE PURCHASED FROM SUN LIFE OF CANADA LAST YEAR. LIFE INSURANCE NOW IN FORCE NEARLY $9 BILLION. $38,700,000 TO BE PAID IN POLICYHOLDER DIVIDENDS IN 1960.

Sales of new life insurance in 1959 by the Sun Life of Canada amounted to $1,041,997,636, largest amount ever sold in its history. Total Sun Life insurance in force is now $8,938,122,126, represented by 2,514,404 individual policies and group insurance certificates. The Company's 89th Annual Report reveals that benefit payments during 1959 also reached a new high of $179,315,492, and that total benefit payments to policyholders and beneficiaries since the Sun Life first commenced operations in 1871 now amount to $3,634,608,245. The Company has announced that $38,700,000 will be paid out in dividends to policyholders in 1960, an increase of $2½ million over the amount paid in 1959.

A RECORD OF PROGRESS

	Life Insurance Sold During Year	Life Insurance in Force	Benefit Payments During Year
1955	$ 761,854,137	$6,534,251,986	$136,691,795
1956	854,865,876	7,030,293,309	137,856,243
1957	917,737,287	7,749,409,986	155,111,192
1958	990,409,536	8,357,666,274	159,337,179
1959	1,041,997,636	8,938,122,126	179,315,492

Financial Statement as at December 31st, 1959

ASSETS

Bonds — Government, municipal, public utility and other	$1,312,116,991
Stocks — Preferred and guaranteed	28,015,953
Stocks — Common	156,601,329
Mortgage loans on homes, industrial plants, etc.	551,075,227
Real estate — Company buildings	19,916,940
Real estate — Held for investment	41,130,035
Loans to policyholders on their policies	90,529,898
Company's stock owned	40,999,300
Outstanding premiums	16,982,044
Interest and rents due and accrued	22,199,680
Cash	23,160,909
Other assets	4,683,744
	$2,307,412,050

LIABILITIES

Actuarial liabilities:		
Insurances	$1,220,281,713	
Annuities	581,465,796	$1,801,747,509
Policy proceeds and other amounts left at interest for future distribution to policyholders and beneficiaries		187,393,803
Reserves on Company pension plans		15,848,420
Policy benefits in process of payment and provision for unreported claims		21,468,617
Provision for dividends payable to policyholders during the year 1960		38,771,385
Taxes and expenses due and accrued		8,794,512
Miscellaneous liabilities		21,730,761
Capital stock		2,000,000
Investment reserve		38,000,000
Surplus		171,657,043
		$2,307,412,050

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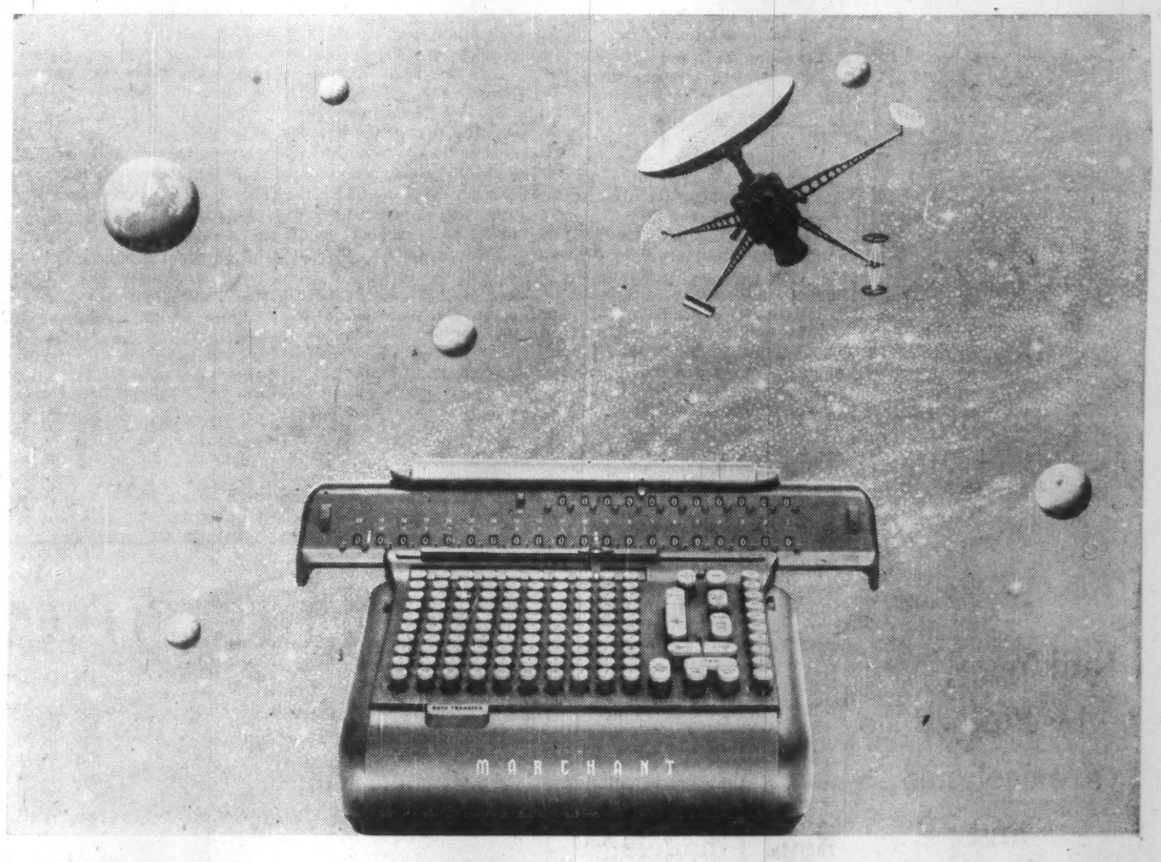

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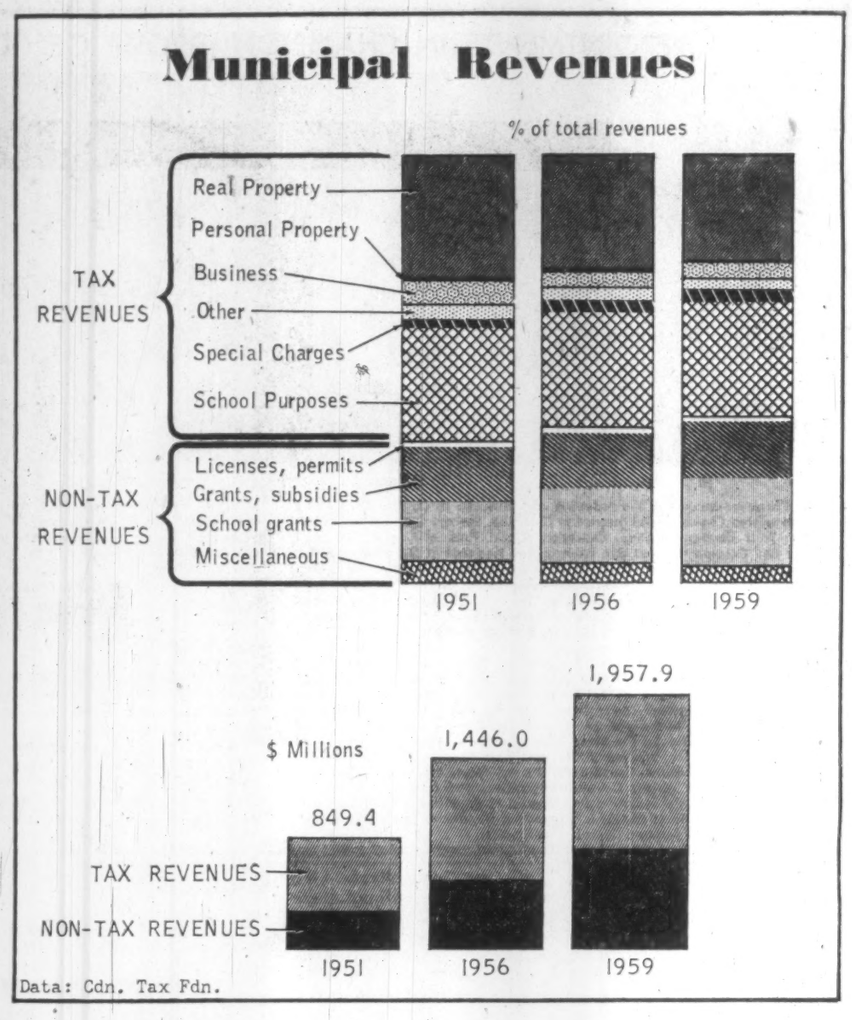

Here's the New Pattern In Municipal Finances

By VINCENT EGAN

A changing pattern of municipal finances is shown in a newly published study by the Canadian Tax Foundation:

- **Taxes on real property** especially, as well as other taxes, are providing an increasingly smaller share of municipal revenues.
- **Provincial grants**, especially for schools, are becoming an ever more important source of revenues (see chart).

"Traditionally," says the Tax Foundation, "real property has been the main source of taxation revenue at the local level in most parts of Canada."

Most municipal expenditures are regular and recurrent. The real property tax is regarded by many as best suited as an adequate, stable, predictable, dependable and economical (to administer) source of revenue.

Critics contend, however, that it is unfair because it no longer reflects ability to pay, unrealistic because real property values are not related to worth of services received, and unsuitable as a means of support for municipal services that are of no direct benefit to property.

Alberta is currently considering a plan (**FP**, Jan. 23, Nov. 7) to meet the familiar criticism about the uneven distribution of large revenue-earning properties such as industry.

Possible remedies are adjustments of municipal boundaries, or the collection by the province of all levies on industrial properties for redistribution to the municipalities.

A study by the Tax Foundation shows that while municipal revenues from real property taxes rose by 98.6% between 1951 and 1959 (from $243.5 million to $483.7 million), they declined as a proportion of total revenues, from 28.7% to 24.7%.

The rise in non-taxation revenues, from 33% to 38.6% of the total, was accounted for by the increase in school grants from the provincial governments to municipalities.

These grants, totaling $118.6 million in 1951, rose by 241.5% to $405 million last year — or from 14% to 20.7% of all municipal revenues.

The impact of municipal taxes varies widely from province to province, and even among municipalities within a given province.

Ontario and British Columbia municipalities have a high incidence of real property taxation, since relatively few other sources of revenue are open to municipalities in those provinces.

Elsewhere, the importance of real property tax may be greatly reduced.

Montreal, for instance, collects a greater income from a combination of the municipal sales tax and water tax than it does from the real property tax.

The town of Shippegan, N.B., in 1958 obtained $37,279 from the personal property tax compared with only $34,412 from real property tax.

Eight of 22 Canadian cities replied to a Tax Foundation questionnaire, asking them to state their tax rates as a percentage of current market values.

In the eight unidentified cities that responded, the rates ran from a low of 1.36% to a high of 3.25%. Three were lower than 2%, and four were between 2% and 3%.

A commissioner, who surveyed the Halifax taxation system in 1957, had suggested that a property tax rate of 2% of actual market values was the starting point of diminishing tax revenue for residential real estate, and that such a rate represented an area of hardship and genuine tax resistance for taxpayers dependent on fixed salaries or fixed incomes.

The replies of the eight cities to the Tax Foundation questionnaire do not support the Halifax commissioner's view.

"Apparently none has experienced any marked additional taxpayer resistance," the Foundation observes.

Bond Financing Off in January

Canadian government, provincial, municipal and corporation public bond financing in Canada for January, 1960, totaled $114,510,671, down 4.1% from $119,419,835 in January 1959, **Wood, Gundy & Co.** reports.

Municipal bond financing during January, 1960, totaled $23,920,671, 164.2% higher than 1959's January total of $9,053,060. A large part of the increase is accounted for by the issue of $13,478,000 6% City of Montreal debentures, due 1964-79.

Provincial direct and guaranteed financing last month totaled $52.3 million made up largely of $50 million 6% Hydro Electric Power Commission debentures, due 1970 and 1980, guaranteed by the Province of Ontario. This was 52.2% lower than for the same month last year.

New corporate bond financing for January, 1960, amounted to $39,340,000 as compared with $3,250,000 in the same month last year. Debentures of **Home Oil Co.** and **Industrial Acceptance Corp.** made up $30 million of this total.

Here is a breakdown of bond issues for the first month of 1960:

Month of Jan.	1960 $	1959 $
Prov. dir. & guar.*	51,250,000	107,116,775
Ont. munic.	4,324,449	4,853,274
Que. & Mari. mun.	19,504,000	2,433,500
West. mun.	92,222	1,766,286
Corporation	39,340,000	3,250,000
Total	114,510,671	119,419,835
Pay. in Cdn. fds.	110,760,671	44,419,835
Pay. in U.S. fds.	3,750,000	75,000,000
Cdn. short term obligations†	525,000,000	675,000,000

*Over two years in term.
†Under two years in term.

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Make Headway With Halifax Improvements

From Our Own Correspondent

HALIFAX — This city has spent close to $500,000 in its campaign to clean up slums and improve the city's appearance.

Last year was the first big push in a program experts say could show results within three years.

The program, begun last year, was inspired by a report by Gordon Stephenson, professor of town and regional planning at the University of Toronto.

Getting rid of many older apartment and commercial buildings was, and still is, the major task.

Paying assessed value plus 5%, the city had spent slightly more than $400,000 by the end of December, 1959.

In accordance with the National Housing Act's urban redevelopment provisions, the federal government is assisting.

At the same time the city last year expended $32,900 as its share in the Mulgrave Park Housing Development now under construction.

The Mulgrave project ($4 million), costs of which are split with the provincial and federal governments, is the key to the city's re-development.

While acquiring land for redevelopment, accommodation must be found for families left homeless. Mulgrave will handle 350 of these.

The city retained a land evaluation expert, C. D. Smith, toward the close of 1959.

He says more than 50% of the land in two sections of the city comprising about 20 acres has already been acquired.

Along nine blocks of Jacob St. some 25 buildings have been demolished.

CREDIT FONCIER FRANCO-CANADIEN

HEAD OFFICE: 5 St. James Street East, Montreal.

BALANCE SHEET AS AT DECEMBER 31, 1959

ASSETS

	1959	1958
OFFICE PREMISES, less amounts written off	$ 1,011,851	$ 944,528
REAL ESTATE	1,100,093	1,790,561
MORTGAGES AND AGREEMENTS FOR SALE, after deduction of investment reserves	77,788,111	75,323,499
UNAMORTIZED DISCOUNT ON DEBENTURES	399,310	255,757
STOCK OF CANADIAN COMPANIES not exceeding Market Value	1,668,774	1,446,282
OTHER INVESTMENTS	4,697,518	2,288,883
DEBENTURES not exceeding Market Value	104,059	1,108,776
DEMAND OR SHORT-TERM DEPOSITS	4,493,204	3,952,813
CASH ON HAND AND IN BANKS	435,119	480,463
MISCELLANEOUS	351,841	296,079
	$92,049,880	$87,887,641

LIABILITIES

	1959	1958
DEBENTURES (including interest accrued and Reserve for Foreign Exchange relative to Debentures payable in Foreign Currencies)	$53,072,903	$48,552,694
SHORT-TERM NOTES	2,502,553	3,427,152
DEFERRED LOANS	893,084	1,167,472
PROVISION FOR INCOME TAXES	567,441	367,920
MISCELLANEOUS	236,564	269,371
PROVISIONS	1,294,794	1,345,049
CAPITAL STOCK: 636,000 shares authorized (without nominal or par value) 424,000 shares issued and fully paid	10,226,527	10,226,527
RESERVES	20,621,234	20,117,228
PROFIT AND LOSS ACCOUNT	2,634,780	2,414,228
	$92,049,880	$87,887,641

To the Shareholders of Crédit Foncier Franco-Canadien:

We have examined the Balance Sheet of Crédit Foncier Franco-Canadien as at December 31, 1959 and the Profit and Loss Statement for the year ended at that date, and we have obtained all the information and explanations required. Our examination included a general review of the accounting procedures and such tests of the accounting records and other supporting evidence as we considered necessary.

In our opinion, and according to the information given to us and as shown by the books, the Balance Sheet and the Profit and Loss Statement present fairly the financial position of the company as at December 31, 1959 and the result of its operations for the year ended at that date, and is drawn in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

CHARTRE, SAMSON, BEAUVAIS, BELAIR, COTE, MARCEAU et ASSOCIES,
Chartered Accountants.

Montreal, February 12, 1960.

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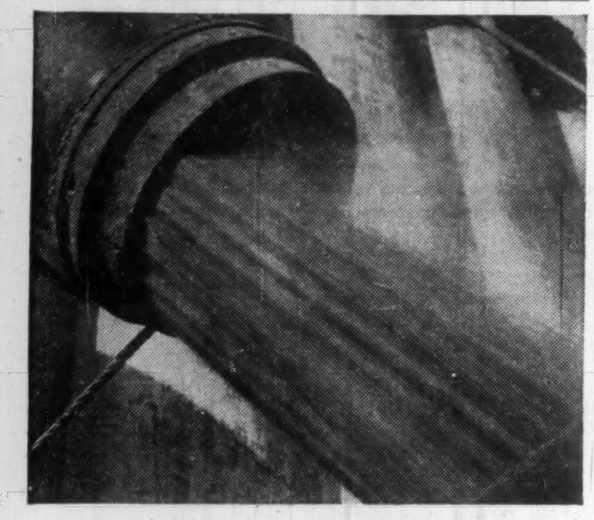

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QUEBEC REPORTS

The Department of Mines in Quebec has released two preliminary geological reports. One report covers a 196 sq. mi. area in the Lake St. Jean area about 66 mi. north of Chicoutimi. The second covers a 215 sq. mi. area on the north shore of the St. Lawrence about 190 mi. east of Sept Iles.

Canada's Patience Wins First Round On Seaway Pilots

From Our Own Correspondent

WASHINGTON — Patience and persistence has brought Canada a first round victory in arranging Great Lakes pilotage with the U. S.

With a bill now introduced in the Senate for mandatory pilotage only in the "restricted" waters, the view Canada has maintained over the past year has clearly won the approval of the administration.

The second round will be fought in the Senate where an okay seems likely.

The House, however, will make round three a little rougher but most observers here believe the representatives will go along with the new pilotage bill after appropriately noisy objections by those who have advocated mandatory pilotage throughout all the Great Lakes.

Mandatory pilotage is the heart of a bill that has been approved by the House Merchant Marine Committee and has been before the House since last summer.

It was urged by the U. S. Coast Guard, but has failed to pass because of objections, mostly by Wisconsin Rep. Henry Reuss, Democrat.

Coast Guard Commandant Vice Admiral A. C. Richmond has indicated that while he is not wildly enthusiastic about the new bill introduced in the Senate with Administration backing, he is willing to go along.

Hearings will be held by the Senate Interstate and Foreign Commerce Committee next week and Admiral Richmond will get his chance to show the degree of his support for the bill.

Canada bitterly objected to mandatory pilotage throughout the Lakes because it would mean a considerable increase in cost for ships using the St. Lawrence Seaway.

It has been estimated it might cost as much as $6,000 more for a round trip in the Lakes to Chicago under such a system.

Safety needs, the U. S. Coast Guard had hitherto claimed, meant mandatory pilotage was necessary.

However, under administration pressure, Vice Admiral Richmond says he is willing to live with pilotage only in the restricted waters.

Under the legislation introduced in the Senate, the president, in consultation with Canada, would declare just where these "restricted" waters are.

It is considered likely they will be between Montreal and Kingston, at the Welland Canal and at some or all of the connecting channels such as the Detroit River and Lake St. Clair.

Under the bill, in the rest of the lakes, a vessel must have aboard at least one officer of the ship's company qualified to direct navigation in the open waters.

This officer would be licensed by the U. S. Coast Guard or by the appropriate Canadian agency.

If the bill passes, the law will not become effective at least until well into next summer.

Under the legislation, it would become effective on the first day of the fourth month after the regulations were issued.

Since it will take a month or two at least for the bill to complete its trip through the U. S. Congressional machinery, and a few weeks for the regulations themselves to be prepared, it means the pilotage arrangements cannot go into operation in the Great Lakes until about July-August.

The new U. S. bill says the Commerce Department, in cooperation with Canada, will issue regulations on qualifications, terms and conditions to assure adequate and efficient pilotage service and to provide for equitable participation by both U. S. and Canadian pilots.

The Commerce Department will set the rates for the pilots in consultation with Canada.

U. S. pilots recently have been pressing for $75-$100 for an eight-hour shift.

The rate, however, will not be this high by the time the Commerce Department and the Canadian Department of Transport get through.

Another section of the bill would permit Canadian vessels of the "laker" and St. Lawrence "canaler" variety to be navigated in U. S. waters of the Great Lakes by their officers without a registered pilot, provided Canada lets similar U. S. vessels do the same thing in Canadian waters.

The officers of such vessels would have to be appropriately licensed.

An advisory committee would be established under the U. S. bill to advise on any pilotage problems that might come up. The three man committee members would receive $75 a day while working.

Company Reports

Trust Companies

HALTON & PEEL TRUST & SAVINGS CO., Oakville, Ont., net profit of $38,752 for 1959 was 118% higher than 1958's net of $17,772.

Total assets under administration increased to $7,451,428 from $4,957,083. Deposits and guaranteed investments stood at $6.3 million at the end of 1959 as compared with $3.8 million at the end of the previous year.

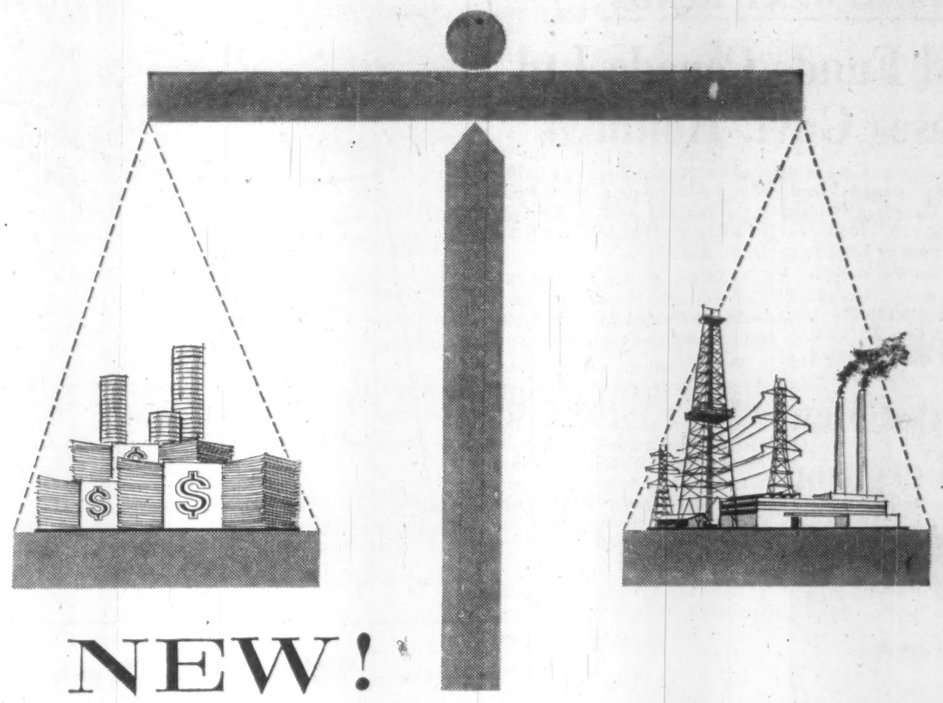
	1959	1958
Liabs. to public, etc.*	$6,271,443	$3,849,826
Sh'holders' equity	731,219	689,783
*Secured by:		
Mtges.	$,118,886	3,875,851
Office premises	79,666	10,999
Liquid assets‡	1,804,110	652,759
Total	7,002,662	4,539,609
‡Includes stocks and bonds.		
Estates fund	448,766	417,474
Net profit	38,752	17,772
Earned per share†	$0.56	$0.26
Paid	0.20	$0.10

†Based on 69,219 shares in 1959 and 67,379 shares in 1958.

‡Initial, paid Jan. 15, 1959.

SALES AND SERVICE

Electronic Mechanical Products Co., has appointed **Electrolabs, Montreal**, as its Luxometer sales and service depot in that area. Electrolab is widely experienced in outfitting and maintaining graphic arts photo electronic installations and in handling control problems incident to platemaking.



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This development, called a unitized microfilm system, has three basic steps: microfilming original drawings or changes; mounting individual frames into die-cut apertures of data-processing cards; and, from the cards, automatically enlarging the microfilmed drawings by xerography, fast and economically, in a XeroX Copyflo 24C continuous printer.

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The aperture cards, which may be machine-sorted for any combination, are stored in miniature working files, occupying only a tiny fraction of the space required by blueprints, intermediates, or originals.

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THE INVESTMENT FUNDS

United Funds Canada Ltd. Increases Govt. Holdings

Net asset value per share of **United Funds Canada Ltd.**, U. S.-owned Canadian mutual fund, at Jan. 29, 1960 was $15.04, a decrease of 7.5% from $16.26 three months earlier.

Total net assets, unaudited, fell 8.7% to $18,632,675 from $20,417,481 at Oct. 30, 1959.

During the quarter, the fund made a net purchase of $1,370,000 in Dominion of Canada securities and sold its holdings of **Simpsons Ltd.** 5½% debentures, due 1979.

Holdings of two bank stocks and one finance company stock were eliminated from the portfolio and two others decreased.

Two mining stocks were dropped and two reduced. In addition, seven other common stocks were eliminated and five reduced. Common stock of **Shawinigan Water & Power** was added and increases were made in **Algoma Steel Corp., McIntyre Porcupine Mines, International Nickel** and five others.

Here are the changes for the quarter in detail:

	Amount held Jan. 31 1960 $	Change since Oct. 30 1959 $
Bonds		
Canada 2/19/60	200,000	+200,000
Do. 4/29/60	300,000	+300,000
Do. 5/20/60	500,000	+500,000
Do. 5½% 10/1/60	1,300,000	+1,300,000
Do. 20/11/59	nil	—200,000
Do. 5½% 1/10/60	nil	—700,000
Simpsons, 5½%/79	nil	—30,000
Common		
Massey-Ferguson	15,000	—5,000
Cdn. Bk. of Commerce	7,000	—1,000
Imperial Bank	nil	—4,200
Royal Bank	5,000	—700
Toronto-Dom. Bank	nil	—6,000
Du Pont of Can.	nil	—4,500
Cdn. Cement	nil	—7,000
Cdn. Dredge & Dock	nil	—10,700
Cdn. Inger. Rand	nil	—9,000
Traders Fin. 'A'	nil	—1,290
Hudson's Bay Trad.	nil	—10,000
Simpsons	2,250	—1,050
Woodwards 'A'	10,000	+6,000
Abitibi	12,500	+5,200
Crown Zell. 'A'	5,000	+300
Price Bros.	5,000	+1,000
St. Lawr. Corp.	17,000	—100
Inter. Nickel	10,400	+400
McIntyre	12,000	+8,000
Mining Corp.	nil	—19,000
Noranda	2,700	—11,800
Normetal	nil	—35,500
Quemont Mining	nil	—11,100
B.A. Oil	nil	—5,000
Cdn. Oil Cos.	11,100	—5,900
Consumers' Gas Co.	13,000	+2,000
Power Corp.	5,000	—400
Shawinigan W & P	4,000	+4,000

Insurance Men Elect Ferguson

William R. Ferguson, city manager, **London Life Insurance Co.**, has been elected president of the Toronto Life Insurance Managers' Association.

FERGUSON

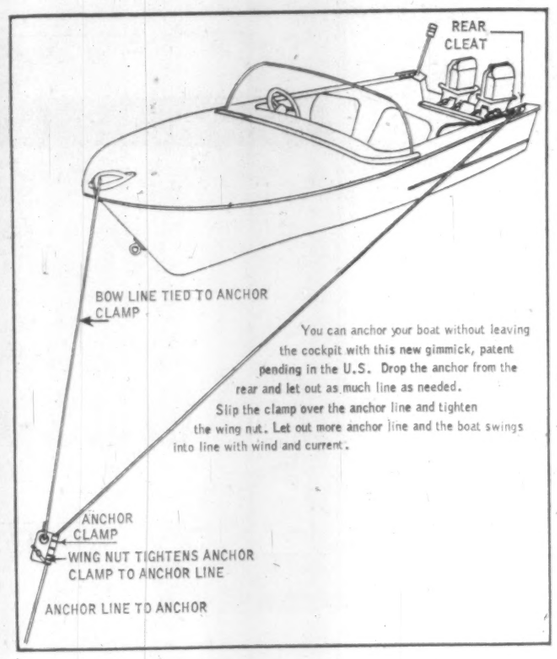
Other officers: Past president, W. A. Hand, **Confederation Life.**

First vice-president, F. W. Godwin, **Metropolitan Life.**

Second vice-president, A. W. Wensley, **Great West Life.**

Treasurer, Norman Duncan, **North American Life.**

Directors: C. G. Francis, **Mutual Life;** L. N. Earl, **Sun Life;** E. B. Lunney, **Excelsior Life;** H. K. Balfour, **Norwich Union.**



What's New

New products, new uses, new ideas, new money-makers. FP reports them here and invites contributions. Write to FP, 481 University Ave., Toronto.

JUKE BOX music can be interspersed with advertising messages. Tape player fitted to a music box automatically announces commercials, then disconnects in time for the next record. You can record up to 100 slogans on the tape. And it can be fitted with an electrical numerator for precise accounting between the music box owner, the agency and its clients.

* * *

CRABGRASS KILLER: Big U. S. chemical company says it has a chemical to rid your lawn of digitaria sanguinalis — better known as crabgrass. The powder prevents the germination and growth of the weed without harming grass, the maker says. It's also said to be inexpensive and non-poisonous.

* * *

ANTI-BURGLAR lock protests if any uninformed hand tries to penetrate the secret of its combination. Made by the U. K. Atomic Energy Authority, it has 12 letters or figures controlled by buttons. The buttons are depressed two by two to give the desired combination. This makes possible 4,356 possible four letter codes. In operating a code to work the lock, the pressure of a wrong button rings an alarm bell. Also if buttons are pressed in wrong sequence, off goes the bell.

* * *

HAZARD of clambering to the bow of a small boat to lower or raise the anchor is eliminated with new rope and clamp accessory. See accompanying sketch.

* * *

PORTABLE oxygen unit is designed for use as an emergency inhalant before a regular source of oxygen is available. You adjust a disposable plastic face mask on the patient, attach an oxygen hose to a push-button valve outlet on a disposable oxygen container. Push the button and oxygen flows for 25 min. of breathing.

* * *

ANTI-STATIC chemicals end problems of electrostatic-caused charges and dust-attracting surfaces of finished products, maker says. One is applied to metal or plastic surfaces, such as light fixtures; the other to textiles, polyethylenes and carpets. The latter prevents static "shocks," the maker claims.

* * *

VIDEO-SONICS is a technique developed by an aircraft firm to give each operator on an assembly line step-by-step instructions for every operation. It uses magnetic tape playing through a headset and a series of color slides that show how the product should look after each operation. The rig looks like a portable TV with earphones. Firm says the technique slashes defect rate, improves product uniformity, increases output and reduces training time.

* * *

SHOWER CONTROL has only one control knob. You simply turn the knob to get hot, cold, or any mixture in between. You pull the same knob in or out to start, stop or to adjust the rate of flow.

* * *

INSTANT PIPE: Machine invented by Arizona engineer casts concrete pipe right in the trench at 8 ft. to 12 ft. per min. The machine pours ready-mix concrete around a length of air-inflated cotton and neoprene hose. The hose acts as the inner form, and about two hours after the cement is cast the hose can be deflated and removed. It comes in lengths of from 50 ft. to 300 ft.

* * *

NEW GLUE hardens to a white, shiny, porcelain finish. Maker recommends the epoxy product for porcelain and enamel repair of bathtubs, sinks, refrigerators and stoves. It also bonds steel, aluminum, iron, wood, glass, brass, most plastics, fabrics, lead, leather and granite, the maker says.

* * *

NEW LITERATURE: Sheet describing a power humidifier that operates in conjunction with furnace blower from **Jenkinson and Co.**, Toronto . . . **United Electric Controls (Canada) Ltd.**, Dorval, Que., has new catalogues and design sheets covering a complete range of temperature and pressure-vacuum controls . . . Catalogue lists parts for 1957 through 1960 ambulances and funeral coaches of the Miller-Meteor Division of **Divco-Wayne Corp.**, Bellefontaine, Ohio . . . **Cochrane Corp.**, Philadelphia, has reprint describing large installation of desilicizer.

Exciting office equipment news—Philips' engineers

PHILIPS

have successfully designed a compact (8" x 10" x 4")

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dictating machine with the performance and features of

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larger more expensive units. Completely Portable—holds

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35 minutes of dictation. Easy magazine loading . . .

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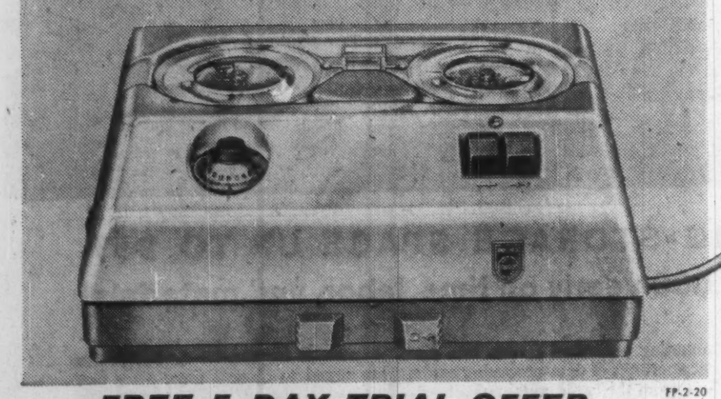

FP-2-20

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Robert C. McPeak, Sales Operating Manager B.F.Goodrich Chemical Company

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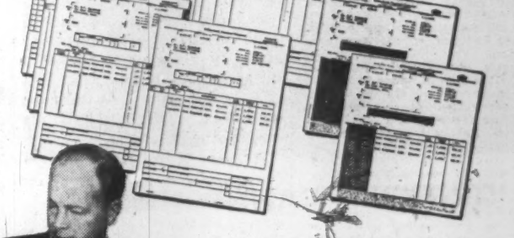
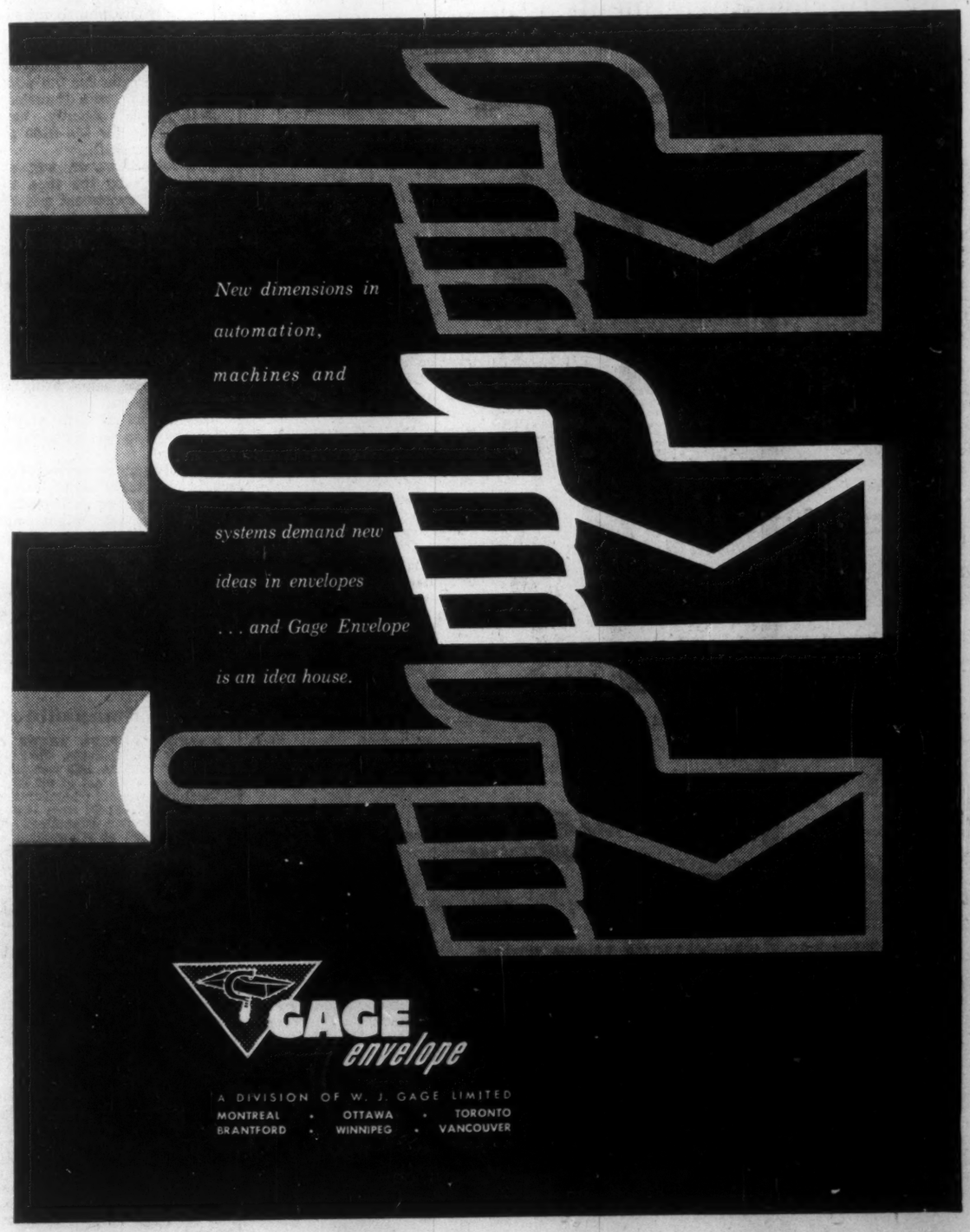


Bell & Howell Internal Auditor, Robert Black, Order-Billing Manager, Herman Hack, and Procedures Supervisor, James Moore, discuss DITTO One-Writing Order-Billing System with William Cadwell, DITTO Branch Manager.

DITTO OF CANADA, LTD., 45 Jutland Rd., Toronto 18



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Barron's never presumes to tell you which stocks or bonds to buy or sell. It does tell you the facts that *affect* securities—the underlying trends, immediate outlook, vital news and statistics that indicate *the intrinsic values.*

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ANNOUNCEMENT

APPOINTED
ROYAL TRUST ADVISOR

ROBERT J. PRETTIE

It has been announced that R. J. Prettie has been appointed an Advisor to The Royal Trust Company's Lakehead Office in Port Arthur. A prominent Port Arthur business man, Mr. Prettie is President of Northern Wood Preservers Limited.

Yugoslavia: Big Market Worth Study

They like our products and they want more trade with the West. Our big questions: Salesmanship and credit . .

By DUART FARQUHARSON

BELGRADE — Yugoslavia, a virtually untapped market as far as Canada is concerned, may offer Canadian businessmen some real opportunity if they are willing to study it.

Recent indications that an upswing in Canada-Yugoslavia trade may be on the horizon.

• **Negotiations** between the Yugoslav Invest-Import enterprise and Canadian interests for the purchase on credit of $12 million worth of installations and equipment for the cellulose and paper industry.

• **The opening up** of an office in Montreal last month by a representative of the leading Yugoslav import-export agency, the Progres enterprise.

• **The decision** of the Canadian government to participate for the first time in the Zagreb international fair next September.

This will give Canadian exporters the opportunity to exhibit their wares at the largest trade fair in the Balkans.

In recent years, trade between the two countries has been meagre, amounting to an approximate $900,000 per annum, more than two thirds of which is usually accounted for by Yugoslav exports of about 60 small items to Canada.

But now there is tremendous interest here in upping the trade both ways. A senior economic official told me he thought the possibilities of improvement were "substantial."

Yugoslav interest in Canadian trade is not altogether new, certainly not since the opening of the St. Lawrence Seaway.

A delegation that visited Canada in 1957 said it believed Yugoslav exports could reach $2 million to $3 million annually in a relatively short time.

Borba, the official Yugoslav Communist newspaper, commented last October that trade with Canada was low "only because the market has not been worked by either side."

What is new is the increasing importance the Yugoslav government is attaching to trade with countries outside Europe.

If some Canadian officials are worried about the possible discriminatory effects of the European Common Market and the European Free Trade Association on trade, the Yugoslavs are doubly worried.

At present, one half of Yugoslav trade is with the Western European countries that make up these groups; another quarter is with the communist countries of Eastern Europe, which have their own trade grouping.

It is therefore the final quarter—trade with the rest of the world—which to the Yugoslavs is rapidly becoming the most important for the future.

For political as well as economic reasons Tito's government has been putting most of its attention to bettering trade with the underdeveloped and often uncommitted nations of Asia, Africa and Latin America.

But Canada has not been ignored.

The Canadian products Yugoslavia seems to be most interested in at present are engineering equipment and heavy machinery.

A country of 18 million people, which sometime this year will become exactly half urban, half rural, Yugoslavia's rate of increase of industrial production in the last five years is first in the world according to United Nations statistics.

It is unlikely that Canada could provide the diesel locomotives and the electrical power plant equipment, to give but two examples of products the Yugoslavs are currently buying, at costs and terms competitive with the U. S., West Germany and France.

But there are unexplored fields where Canadians might very well compete if they had the will.

For instance, tractors and combines are made in Yugoslavia under license from **Massey-Ferguson** in Coventry, Eng. But it has been noticed that large combines of the type used in the Canadian West might be just as well suited for the Vojvodina plain of Yugoslavia where the U. K. combines are not.

There are also great possibilities in the purely agricultural field attested to by an Ontario hybrid corn merchant who has made several successful trips here.

Canada can offer some of the best quality seeds the Yugoslavs need at a competitive price. There is also interest in Canadian ham and bacon pigs and purebred Hereford cattle.

The best example of both the opportunity and difficulty of the Yugoslav market for Canadian exports is the 12 million paper mill machinery talks already mentioned.

In quality of such products, the newspaper Borba recently commented, Canada is first.

The questions:

• **Can Canadians** persuade a young country in a hurry that it is worth paying more money for machinery that's guaranteed to stand up a long time?

• **Are Canadians** willing to grant the sort of credit terms—low interest and long-term repayment in local currencies — that Yugoslavia itself grants underdeveloped countries?

That's not the way Canadians are accustomed to doing business, but, for the time being, it is the only way the Yugoslavs can.

For in spite of their success in increasing exports the planned deficit of payment's balance for 1960 is $84 million (as compared with an average of $151 million in the years 1953 to 1956).

Food, Tobacco Companies Discussing P.E.I. Sites

From Our Own Correspondent

CHARLOTTETOWN — Establishment of two new industries is being discussed in Prince Edward Island.

• **A group** said to represent **Citrus Corp. of America** has shown interest in opening a potato flaking plant.

• **A syndicate** headed by Ernest Leitch of Dorchester, Ont., has had discussions with the provincial cabinet which might lead to formation of a company to grow tobacco.

A veteran tobacco grower, Leitch last year supervised experiments with a hardy strain of plants on 18 acres at Greenfield, about 25 mi. east of Charlottetown.

Experiments proved successful and P. E. I. sees an opportunity to diversify farming by injecting high-dollar-yield tobacco into the picture.

Leitch said an acre of tobacco costs from $400 to $450 and should return more than $700.

Capital investment, other than in land, would be $25,000 for a 40-acre farm.

The flaking plant backers say they would provide an outlet for all Island-grown potatoes not sold on other markets.

An important flaking plant product:

Instant mashed potatoes.

Industry-starved Prince Edward Island is anxious to encourage such enterprises and, if plans materialize, financial assistance may be provided by the government's industrial development branch.

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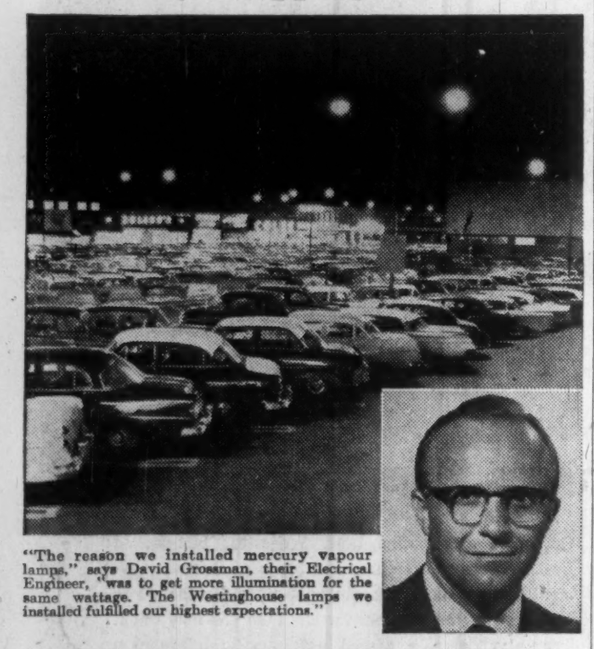
How Principal Investments Ltd. got more light per dollar at Lawrence Plaza, one of their many shopping centres.



"The reason we installed mercury vapour lamps," says David Grossman, their Electrical Engineer, "was to get more illumination for the same wattage. The Westinghouse lamps we installed fulfilled our highest expectations."

NEW WESTINGHOUSE EXCLUSIVE! "LIFEGUARD" MERCURY LAMPS

For industrial lighting! For street lighting! For parking lot lighting! The new Westinghouse "Lifeguard" Mercury Lamp brings new performance, new economy, new convenience! It features a new design electrode with specially-compounded and locked-in emission material that virtually eliminates light-robbing arc tube blackening.

New "Lifeguard" arc tube improves lumen maintenance. Even after 10,000 hours these new Westinghouse Mercury Lamps continue to deliver 85% of initial output. These are the first "Weather Duty" lamps in the business, featuring fume-proof, moisture-proof, shock-resistant glass.

And exclusive Westinghouse "Lifeguard" Mercury Lamps have a permanent-grip silicone cement that holds bases tight for the life of the lamp. Even at high temperatures, there's no strain on the glass. So, for big savings on labor and maintenance costs, for the finest in modern lighting, switch to new Westinghouse "Lifeguard" Mercury Lamps. They'll fit your present installation.

Canadian Westinghouse offers the widest range of mercury vapour bulbs in Canada. For information, write: Lamp Division, Canadian Westinghouse, P. O. Box 1089, Three Rivers, Quebec.

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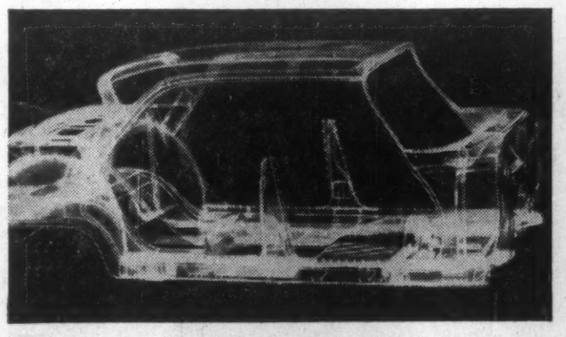
Once around a '60 Plymouth

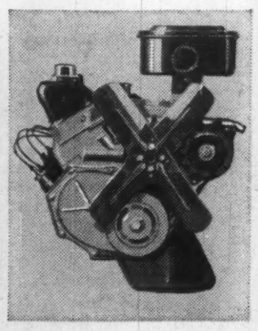
(MOST PROFITABLE WALK YOU'LL EVER TAKE)

A QUALITY PRODUCT OF CHRYSLER CORPORATION ENGINEERING

Open and close a Plymouth door. That solid "thunk" you hear is just the merest hint of a big Plymouth difference you can't see—new one-piece Unibody! A body that gives you quiet—with not a bolt in it to chatter loose and rattle as you ride. A body that gives you comfort—with the added depth to provide more leg and headroom. A body that lasts—thoroughly rustproofed and virtually *four times* as rugged as the two-piece bodies on competitive cars.

Lift Plymouth's solid hood and see the year's newest six-cylinder engine. Here's an angle on engines you've never seen before. Plymouth's new 30-D Economy Six is inclined 30° to combine savings and performance like never before. Straight-down air intake provides superior engine breathing. Unique individual-cylinder manifold feeds the correct diet of gas to each separate cylinder—unlike competitive engines. You get more horsepower—you use less gas!





Look at a finish that's slated to stay that way. Unlike other cars, Plymouth is chemically dipped *seven separate times* to keep it more spotlessly rustproof than any car before it.

Put on your hat and slide inside. Though the seat's higher, your head seems lower. Plymouth Unibody construction adds up-and-down room to take the crouch out of driving.

Look at a style that saves you gas. Plymouth's lines are practical as they are pretty. New design cuts wind drag at highway speeds by 15% for extra mileage on every gallon of gas!

Now whistle it around the block. Feel the magic of a suspension system the others still haven't matched: improved Torsion-*AIRE* to cushion every move your Plymouth makes.

More? Indeed there is. And your Plymouth dealer is anxious to show you. Drop in for a Plymouth once-around today!

THIS YEAR PLYMOUTH MAKES THE BIG CHANGES!

A WORD TO CANADIAN BUSINESS MEN

Are you interested in locating European sources of supply of Engineering Equipment, Parts and Materials? If so, please contact me. I can locate them for you. I am a Canadian Professional Engineer of wide experience, registered in Ontario, resident in Switzerland in the heart of Europe, and am familiar with European industry.

D. HEPBURN, P.Eng.
26 Zwingerstrasse,
Basel, Switzerland.

ANNOUNCEMENT

W. A. RITCHIE

The appointment of W. A. Ritchie as agency superintendent of Co-operative Life Insurance Company has been announced by J. F. Midmore, general manager. Mr. Ritchie assumed his duties in Regina on February 1st.

For the past twelve years Mr. Ritchie has been with the agency department in the Canadian head office of Norwich Union Life Insurance Society, Toronto. During this time he has had experience in all phases of agency operation and promotion.

Business Across Canada

HOW'S BUSINESS? That's the big question right across the country. This FP feature helps to answer it for businessmen everywhere, by comparisons for representative cities coast-to-coast.

This table shows figures for November, latest complete month available. Despite the time lag, the comparisons are valuable indicators of each area's business health.

	Average Weekly† Wages and Salaries $	Average Wkly. Wages† and Salaries Change %	Employment Indexes Change %	Consumer Price Indexes Change %	Value of Building Permits Change %	Housing Starts 11 Months Jan.-Nov. Change %
		COMPARISONS NOVEMBER 1959-NOVEMBER 1958				
St. John's	52.17	+4.8	+7.6	+1.7	+46.2	—47.1
Halifax	58.76	+1.8	+2.9	+2.7	+39.1	+15.1
Saint John	57.27	+4.9	+6.8	+1.9	+78.7	—10.8
Quebec	63.13	+5.9	+1.3	....	—56.6	+3.1
Sherbrooke	59.88	+2.6	—0.2	....	+48.2	+71.6
Trois Rivières	70.12	+4.5	+1.9	....	—27.6	—2.1
Montreal	73.43	+4.9	+2.7	+1.1	—48.4	—17.1
Ottawa-Hull	68.47	+4.4	+1.4	+1.6*	—65.9	+2.7
Toronto	76.76	+2.6	+0.6	+0.8	+38.1	—21.6
Hamilton	82.22	+7.8	+6.2	....	+11.4	—9.1
St. Catharines	83.15	+4.2	+1.0	....	+30.6	+7.1
Brantford	70.07	+3.0	—1.0	....	—22.6	+28.6
Kitchener	70.27	+3.8	+5.3	....	—49.4	+13.1
London	70.27	+3.0	+3.2	....	—30.3	—3.0
Windsor	80.01	+0.2	—3.9	....	+42.4	—36.8
Ft. William-Pt. Arthur	76.44	+4.1	—7.5	....	—25.5	—18.5
Winnipeg	67.62	+4.6	+2.7	+1.5	—81.9	+11.0
Regina	67.49	+5.5	+4.4	+1.3‡	—29.6	+33.4
Saskatoon	66.42	+3.3	+1.9	....	+30.9	+8.4
Edmonton	71.52	+3.6	+5.0	+1.6‡	—26.8	—36.9
Calgary	71.85	+4.4	+6.0	....	—4.9	—6.9
Vancouver	80.14	+3.7	+1.2	+1.8	+23.2	—23.0
Victoria	71.57	+1.4	—2.7	....	+4.7	—18.7

Notes: (1) †Industrial composite at Nov. 30, 1959.
(2) *Ottawa only.
(3) ‡Joint indexes for Regina-Saskatoon and Edmonton-Calgary.
(4) Blanks indicate figures not available.
(5) Sources: DBS reports.

CLARK® EQUIPMENT Mobility

More earth moved in one load than 50 men once did in a day

This is just one example of how Clark machines bring mobility to the industries of the world . . . mobility that frees men for more useful, less dangerous, more satisfying jobs than lifting, loading, and lugging. There are many other advantages. We'd be glad to tell you about them.

Clark Equipment Company
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Construction • Truck-Trailer • Material Handling Equipment

THE INVESTMENT FUNDS

Economic Investment Trust Increases Bond Holdings

Economic Investment Trust, Toronto, total net assets of $11,125,566 at Dec. 31, 1959 were 3% higher than $10,803,061 at Dec. 31, 1958.

Break-up value per share rose 4% to $53.72 from $51.61 at the 1958 year end.

At Dec. 31, 1959, 15.6% of the trust's funds were invested in fixed income securities (9.6% the previous year); 2.5% (3.3%) in preferred stocks, and 81.9% (86.9%) in common stocks.

During the quarter, the fund added four fixed income securities to its portfolio and increased two others. Three corporation bonds were liquidated and one reduced.

Holdings of five preferred issues were liquidated and one reduced. Four preferred stocks were purchased including **Canada Iron Foundries,** 4¼% preferred and **International Utilities,** $2 preferred.

In the common stock category, 16 stocks were purchased of which five were other than Canadian issues and 10 were increased. Twenty-five common stocks were eliminated including 11 in the mining and petroleum and pipelines category. Holdings of 12 other common issues were reduced.

Here are the portfolio changes for 1959:

	Amount held at Dec. 31 1959 $	Changes since Dec. 31 1958 $
Bonds		
Can. Tres. Bills '60	800,000	+800,000
Canada 3%/61	nil	—125,000
B.C. Elec. 6%/84	100,000	+100,000
Cdn. Delhi Oil 5½%/73	nil	—50,000
Greater Wpg. Gas 6%/79	50,000	+25,000
Gt. Lakes Pwr. 5¾%/77	nil	—50,000
Ind. Accept. 5¾%/77	nil	—70,000
Imperial Invest. 6¼%/79	50,000	+50,000
Pembina Pipeline 5%/74	18,000	—17,000
Quintus Leaseholds 5%/68	nil	—70,000
Shaw. W. & P. 5½%/72	100,000	+50,000
Utd. Dominion note/60	100,000	+100,000
Preferred	**Shares**	
Biltmore Hats 'A'	nil	—1,400
Bowater Corp. of NA 5%	nil	—1,500
Can. Iron Found. 4¼%	500	+500
Dom-Scottish 5%	500	—500
Ind. Accept. 4½%	nil	—475
Jockey Club 5½%	nil	—2,500
Brockville Chem. 6%	1,000	+1,000
Cdn. Iron Found. 4¼%	500	+500
Intl. Util., $2	1,000	+1,000
Que. Nat. Gas 6%	500	+500
Common		
Bank of Montreal	2,500	+500
Bank of Nova Scotia	2,500	+500
Do. rts.	nil	—2,000
Can. Perm. Mtge.	2,000	—75
Cdn. Bk. of Commerce	4,500	+1,000
Do. rts.	nil	—3,500
Imp. Invest. 'A'	nil	—4,000
Ind. Accept.	3,000	—4,000
Toronto Mtge.	nil	—200
Fst. Nat. City Bk.	nil	—1,000
Banque Can. Nat.	2,000	+2,000
Imperial Bank	2,500	+2,500
Hiram Walker G&W	10,000	—2,000
Cdn. Breweries	2,000	+2,000
Can. Packers 'B'	2,000	—1,000
Fed. Grain 'A'	2,500	+500
Geo. Weston, warr.	nil	—3,000
Aluminium Ltd.	nil	—3,000
Cdn. Dredge & Dock	4,500	+2,500
Ford of Canada 'A'	nil	—1,000
Confederation Life	nil	—240
Excelsior Life	1,085	+790
Manufac. Life	nil	—360
Intl. Bus. Machines	200	+75
Minn.-Honey. Reg.	750	—250
Modern Containers	nil	—1,000
Corning Glass Works	500	+500
Du Pont de Nemours	300	+300
Canadian Tire Corp.	400	—200
Dominion Stores	1,000	—2,000
G. Tamblyn	5,000	+1,000
Beaver Lumber	1,500	+1,500
Simpsons Ltd.	1,000	+1,000
Woodwards 'A'	2,000	+2,000
Mining Corp.	nil	—3,000
Quemont Mining	nil	—3,000
Labrador Mining	1,000	+1,000
B.A. Oil	nil	—2,150
Calgary & Ed. Corp.	nil	—1,000
Central Del Rio	nil	—2,000
Cons. West Pete	nil	—8,000
Standard Oil (N.J.)	nil	—1,000
Alta. Gas Trunk	nil	—1,500
Cdn. Inter. Gas	nil	—1,750
Interprov. Pipe	5,000	+1,000
Panhandle Eastern Pipe	nil	—1,000
Tenn. Gas Trans.	2,000	—400
Trans-Can. Pipe	nil	—2,000
Consumerss Gas	3,000	+500
Gt. Lakes Power	nil	—1,250
Nfld. L. & P.	1,000	—275
Union Gas	8,000	—2,000
Lower St. Lawr. Pwr.	2,500	+2,500
N.S. Light & Pwr.	5,000	+5,000
Quebec Nat. Gas	750	+750
Consol. Paper	3,000	—2,000
MacMillan & Blo. 'B'	900	—1,600
Can. So. Rlwy.	nil	—1,000
Monsanto Chemical	nil	—1,000
Walt Disney Prod.	1,000	+1,000
Chas. E. Frosst	3,000	+3,000
Merck & Co.	500	+500
Vick Chemical	1,000	+1,000

Two Plants Raise Edmonton Output

From Our Own Correspondent

EDMONTON — Two more industrial plants, one completed and the other projected, will increase production in the Edmonton area this year.

At Camrose, southeast of Edmonton, **Western Shipping Containers Ltd.** will build a $500,000 plant to manufacture metal containers, such as drums, pails and kegs.

Work will start this spring. A seven-acre site has been purchased.

The plant will be able to produce about one million containers a year for Western Canada industry.

R. W. Sexton, of Calgary, is president of the company; secretary-treasurer, J. V. Kubasek, of Vauxhall, Alta.; general manager of the plant, Pat Harrison, who was with the **Canadian Bank of Commerce** for 42 years.

Near Onoway, 35 mi. northwest of Edmonton, **Baroid of Canada Ltd.,** has completed a new plant for the processing of oil well grade bentonite and barite ore.

The site also will serve as a major warehousing and distribution point for other company products.

The bentonite used for the manufacture of oil well drilling fluid, is mined in the Onoway area and hauled by truck to stockpiles at the plant.

Barite is mined in southeastern British Columbia and shipped by rail to Onoway.

The company plans to include the processing of mud treating chemicals and other mud products at the new plant.

T. A. Studer, formerly of Swift Current, Sask., is plant superintendent.

ANNOUNCEMENT

CROWN LIFE ELECTS NEW DIRECTOR

F. H. SHERMAN

The election of Mr. Frank H. Sherman as a Policyholders' Director has been announced by the Crown Life Insurance Company of Toronto.

Mr. Sherman is President and General Manager of the Dominion Foundries and Steel Limited. He is also a director of the National Steel Car Corp. Ltd.

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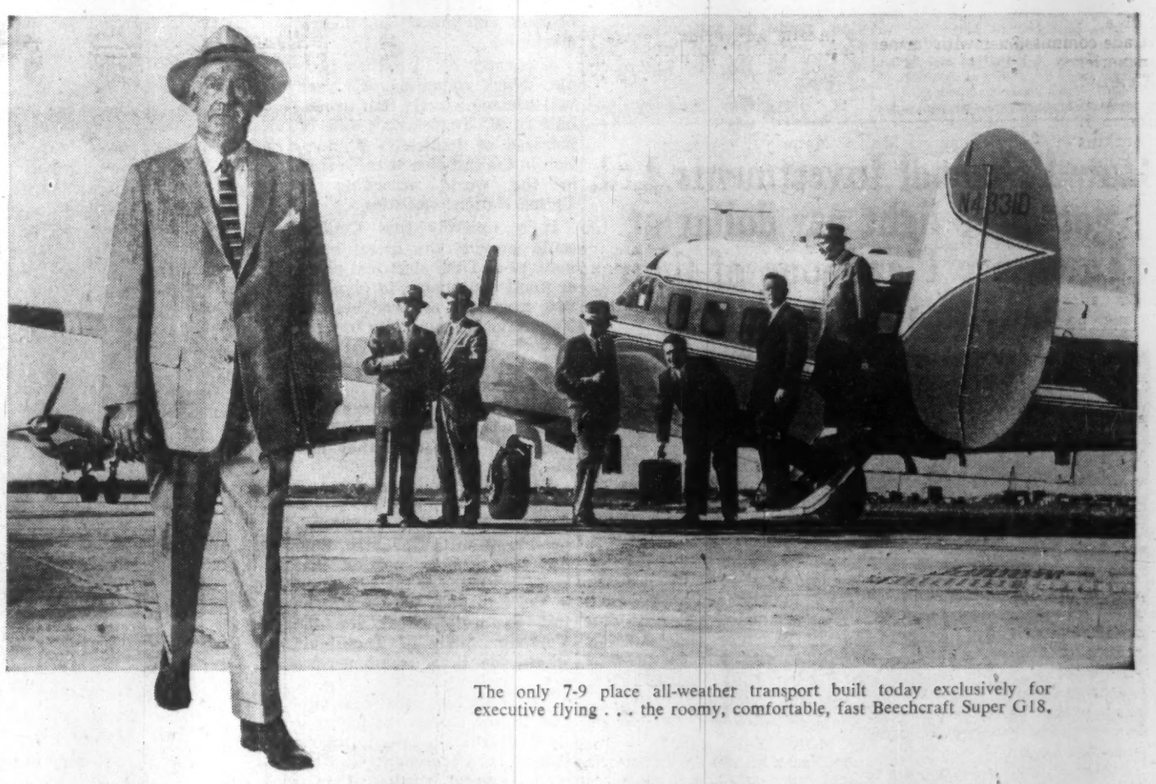

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Aussie Trade Fears Calmed

New Canadian-Australian trade agreement provides for consultation on changes in tariff concessions . . .

OTTAWA (Staff) — The new Canadian - Australian trade agreement puts unusual emphasis on maintaining close consultation between the two governments.

The consultation clauses are wide enough to cover even the Australian fear of Canadian quota restrictions which are the subject of the unpublished undertakings in the secret exchange of letters.

John McEwen, Deputy Prime Minister and Trade Minister of Australia, declared in announcing the agreement that "one of Australia's objectives" was to get such undertakings from Canada.

He called it "some assurance that tariff concessions would not be impaired by non-tariff measures" (which means import restrictions).

Canadian agricultural policy was the principal stumbling block.

Agriculture Minister Harkness was most reluctant to tie his hands by giving Australia special undertakings not to ban imports of things like lamb, butter, cheese, and fruit.

But agreement was eventually made possible when Canada agreed to a form of words which the Australians accepted as giving them some assurance against arbitrary restriction of their exports to protect Canadian farmers.

At least, they are assured that Canada will consult them in advance and will not make use of all the loopholes it might be able to find in GATT's "waivers" or "exceptions".

The machinery for consultation involves new diplomatic appointments.

Australia has already posted a Commercial Counsellor in Ottawa.

He is Rupert Hudspeth, a trade commissioner with former experience in India and New Zealand.

Canada is sending to Canberra R. B. Nickson, at present working in the Commonwealth section of the International Trade Relations Branch of Trade and Commerce.

(This is another step in the new policy of exchanging men between the International Trade Relations Branch at headquarters and the Trade Commissioner posts overseas.)

With these new representatives, standing committees will be established in both capitals to concert plans and action on a wide range of trade matters.

The agreement lists these subjects:

- **Instability** in international trade in basic primary production.
- **Shipping problems.**
- **Non-tariff obstacles** such as agricultural protectionism, import restrictions, surplus disposal transactions, other non-commercial trading practices, and export subsidies.

About 65% of Canada's exports to Australia are protected by the new binding of preferential margins.

Most of the rest consists of goods which never had enjoyed any preference, such as asbestos, tobacco, sausage-casings, and certain chemicals.

In some of these cases, Australia has "bound' its free entry for Canadian goods e.g. asbestos, sausage casings, cyanide of sodium and calcium cyanide.

Among the bound margins are nearly all the items bound in the previous agreement, plus a number of important new items.

These include stainless steel, aluminum, some chemicals, office machinery, newsprint, tissue paper and printing paper, (but not wrapping paper, which still has to pay the m.f.n. rate), building board, aircraft parts and paper-makers' felts.

The preferential margin on stainless steel will be held at 70 shillings per ton, and Canada is now assured of keeping the b.p. rate, which means getting equal treatment with the U. K.

Aluminum in blocks, cubes, ingots, pigs, scrap and granulated, and primary aluminum alloys are assured of the b.p. rate and a margin of 7½% below U. S. and other foreign countries.

(This however is one of the items still limited by quota in order to preserve Australia's own industry and one which, under the Australian system of tariff changes by "bylaw", has been admitted duty-free from foreign sources as well. (Australia retains this right under the new agreement, but promises to consider any Canadian representations when preferences are eliminated.)

All the following goods are assured of free entry into Australia, and a margin of preference of 7½%:

- **Knitting** machine needles.
- **Bookkeeping** machines.
- **Typewriters.**
- **Cash registers.**
- **Tabulating** machines.
- **Felts and wires** for paper-making machines.

The following goods get bound free entry and 7½% preference:

- **Roller bearings** and ball bearings (ex. plummer or hanger blocks);
- **Acetic anhydride,** pentaerythritol, styrene monomer, vinyl acetate monomer (not packed for retail sale).
- **Aircraft parts.**
- **Motor vehicle parts.**
- **Synthetic resins** of polyethylene, (except when under by-law).

The timber and paper items are more involved, because the preference margin is expressed in shillings and pence but the bindings are still considered important.

Undressed red cedar gets assurance that the present margin of two shillings per 100 super feet will continue.

On other timber it is one shilling.

Plywoods and veneers similarly get the present margins bound.

On newsprint and printing paper Canada is assured of the b.p rate, which means it will be on a level with U. K. and New Zealand with a margin of £4 (Australian) against other countries.

Mid-Western Earnings Jump

Net profit of Mid-Western Industrial Gas Ltd. jumped sharply in 1959 to $490,299 ($194,840 the previous year).

The figure is before income taxes, but company still has sufficient exploration and development costs to apply against income to indicate it will not be in income tax position for some time.

Total revenue increased by over 41% to approximately $1,-891,000. In October last year a well was completed as a small potential gas well on acreage purchased earlier in a government land auction sale. The acreage is 25 mi. south of the Provost gas field in Alberta.

Calgary Power Ltd. plans to commence coal mining operations at its Wabamun project. This will result in a decrease in natural gas sales to that customer.

It's felt that the Wabamun plant will continue to use natural gas for part of its fuel needs.

QNG Establishes Four Scholarships

MONTREAL (Staff) — Four $500 scholarships for engineering and business students have been established by **Quebec Natural Gas Corp.**

They will be awarded annually to students in the schools of engineering and commerce at McGill University and at Ecole Polytechnique and Ecole des Hautes Etudes Commerciales.

Selection of students is to be made by the faculties. No conditions will be specified by the company, according to Executive Vice-president Leonard Milano.

B.C. Telephone Net Up 60%; Issue $12 Million Preferred

MONTREAL (Staff) — Net profit of **British Columbia Telephone Co.** for 1959 was $6,672,-300, up 59.9% from $4,173,071 in the previous year.

This was revealed in a prospectus covering an offering of $12 million 6¼% cumulative redeemable preferred shares ($100 par), being made by a syndicate headed by **W. C. Pitfield & Co.**

Net operating and non-operating revenues (after deducting operating and administrative expenses but before depreciation, interest and taxes) were $26.3 million in 1959, up 46.1% from $18 million in 1958.

Operating revenues at $54.9 million for 1959 were 22.3% higher than $44.9 million in 1958.

At Dec. 31, 1959, company had 505,432 telephones in service, 5.1% more than 480,707 a year earlier. At the end of last year, 71% were residential telephones and 29% business.

In 1959, company spent $40.9 million for new construction. It expects to spend between $40 million and $50 million this year.

Proceeds of the issue are to be used to repay temporary bank loans totaling $11.5 million. Balance is for general corporate purposes.

The preferred shares being offered are redeemable at a premium of 5% on three months' notice.

Outstanding capitalization, after the issue, will comprise $102.5 million in eight series of first mortgage bonds; $3,193,000 in 15-year 4% short-term notes due Nov. 1, 1962; $53.5 million in eight issues of preferred shares; and $37.5 million in common stock ($25 par).

Name A. B. Yeates Executive V-P Ad Association

Allan B. Yeates has been named executive vice-president of the Association of Canadian Advertisers.

He is director of public relations, sales promotion and advertising for the **Prudential Insurance Co. of America.**

Mr. Yeates remains as ACA treasurer and replaces James C. Miller in his new post.

ACA also announces appointment of two vice-presidents, E. T. Gater and F. J. Farthing, to the association's executive committee.

Mr. Gater is vice-president of **Sterling Drug Mfg. Ltd.** and Mr. Farthing is manager, general advertising, **Canadian Westinghouse Co.**

ANNOUNCEMENT

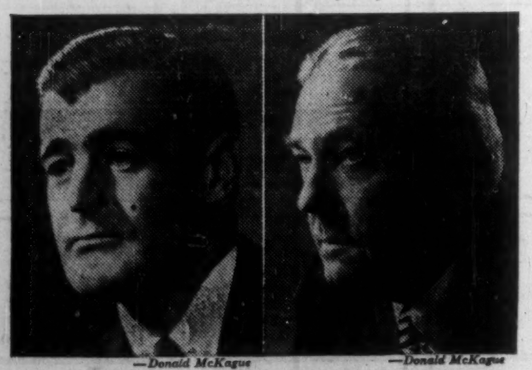
A. DAVIS AND SON LIMITED EXECUTIVE CHANGES

HAROLD W. DAVIS — HAROLD P. DAVIS — NEIL C. DAVIS

New Executive appointments are announced by The Board of Directors of A. Davis & Son, Limited, Kingston, Ontario. Harold W. Davis is elected President, Harold P. Davis Vice-President and Treasurer, and Neil C. Davis, of Toronto, Secretary and Director. One of Canada's oldest and largest privately owned upper leather tanneries, the Firm is now entering its 126th year of operation.

ANNOUNCEMENT

The Prudential Insurance Company of America



—Donald McKague — —Donald McKague

HOWARD A. AUSTIN — ROBERT M. GREEN

The election of Howard A. Austin as vice president in charge of Canadian operations has been announced by Carrol M. Shanks, president of the Prudential Insurance Company of America. Mr. Austin, who has been second vice president in the Canadian Head Office in Toronto since 1958, succeeds Robert M. Green, who previously was the Prudential's chief executive officer in Canada and who has retired.

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THIRTY OFFICES THROUGHOUT CANADA

'60 Should See New Pattern Emerging on the Seaway

By MICHAEL BARKWAY

OTTAWA (Staff) — The full traffic report on the first season's operation of the St. Lawrence Seaway indicates three major reasons for the shortfall in both traffic and revenue.

All of them are features of the disturbed and experimental traffic conditions resulting from the provision of a great new artery. All three should be greatly changed in subsequent years' operations.

Here are the outstanding figures:

● **Of all the ships passing through the St. Lawrence locks during last year's navigation season 36% were in balast. Of the transits through the Welland, 32% were in ballast.** In both cases more than 80% of the ships in ballast were lakers.

● **Small ships, comparable to the old 14-ft. canallers, still dominated last year's traffic.** Ships of less than 3,000 gross tons accounted for 73% of the passages through the St. Lawrence canals and 60% through the Welland.

The big ships for which the seaway was built made only a small showing last year. All ships of over 10,000 gross tons — including the new giants of over 17,000 tons — accounted for only 7% of the transits through the St. Lawrence canals and 9% through the Welland.

● **United States shippers have been slow to develop new routes making use of the new cheap water transport**—especially between U. S. ports. More than 36% of the traffic through the St. Lawrence and 23% through the Welland consisted of cargo moving between two Canadian ports.

Traffic between U. S. ports made up less than 4% of the Welland traffic, and about 0.2% of the St. Lawrence traffic.

All three of these features of last year's Seaway traffic are anomalies, which to some extent defy the economics of transportation.

Some authorities believe, therefore, that they will progressively disappear as North American traffic patterns adapt themselves to the new waterroute.

1. Too many unladen voyages. Last year, which saw something of a scramble for Seaway cargoes, both lake vessels and ocean-going ships made a large number of one-way trips with cargo and returned empty.

But this was a much more prominent feature by lake operations than it was for ocean vessels.

(A) Ocean vessels:

A total of 240 ocean-going ships went into the Upper Lakes, and most of them came out with cargoes. Presumably they were mainly ships going to pick up grain cargoes from the Head of the Lakes.

Ten of the 240 had cargoes through the St. Lawrence canals, which they must have dropped off at Lake Ontario ports, before proceeding through the Welland.

Coming down again only 33 out of the 240 passed through the Welland in ballast. But — more unexpectedly — some downbound cargoes must also have been unloaded in the Lake Ontario section because 63 ocean vessels were in ballast going through the St. Lawrence canals downbound.

The proportion of total passages made in ballast by ocean vessels was about 13-14% in both the St. Lawrence and Welland canals.

(B) Lake vessels.

The lakers' record of empty voyages is amazingly greater. Nearly one lockage out of every three passed an empty ship laden with ballast. On the St. Lawrence canals 31% of the transits by lake ships were in ballast. On the Weland it was 32.4%.

The disparity between the total cargoes upbound and downbound accounts for some of the trips in ballast, but by no means for all.

On the St. Lawrence, 53.4% of total cargoes were upbound, and 46.6% downbound.

On the Welland, the disparity is much greater: 35% of the cargoes are upbound and 63% downbound.

Half the lakeships passing through the Welland upbound were in ballast. But so were 14% of the lakers going down river.

On the St. Lawrence 645 lakers coming up empty passed 661 going down empty. This was roughly 30% of the lakers' passages in each direction.

What happened last year is that shipping companies accepted contracts to move, say, iron ore one way without in most cases getting return cargoes; while another company put two or three ships on to move the return cargo the other way (when there was any).

The shuttle movement by the big lakers, taking grain down and bringing iron ore up, which economists have expected to see, hardly developed at all last year. A few ships did it.

But most of the big lake vessels under contract to bring up from Seven Islands did not carry grain down to Montreal. One reason, it is believed, is that their owners were afraid of being delayed over the grain shipments, loading or unloading, and so being thrown off schedule with their ore contracts.

A considerable difference may appear in the 1960 season, with the new Cargill grain elevators open for business at Baie Comeau.

With assurance of quick discharge at the new terminals, observers are looking for the grain-ore shuttle service through the Seaway to develop a good deal further in 1960 and the following seasons.

2. Too many little ships. The gradual elimination of the old canallers built for the 14-ft. canals is a matter of time and ages as were made in the 1959 season, the Welland canal could have carried many times more cargo if it had been carried in big ships.

As it was, the 60% of transits made by ships of under 3,000 gross tons carried only 26% of the downbound cargo. But the 9% of transits made by ships of over 10,000 tons carried 33% of all the cargo downbound.

3. Too little U. S. traffic. Although the U. S. accounts for most of the overseas traffic using the Seaway, especially in general (rather than bulk) cargoes, traffic between U. S. ports has been slow to develop.

U. S. shippers probably never have used the Great Lakes-St. Lawrence system to anything like the same extent as Canadians, for whom it has always been one of the "highways of the nation".

U. S. ships constituted only 16% of those using the Welland, and only 7% of those using the St. Lawrence canals.

Here is the breakdown of cargoes carried through the system by origin and destination:

St. Lawrence Canals:
Canada-U.S.: Outbound: 28%
Inbound: 9%
Total: 37%
Canada-Canada: 36%
U.S.-U.S.: 0.2%
Canada-Overseas: Outbound: 4%
Inbound: 4%
Total: 8%
U.S.-Overseas: Outbound: 14%
Inbound: 5%
Total: 19%

Welland Canal:
Canada-U.S.: Outbound: 25%
Inbound: 32%
Total: 57%
Canada-Canada: 23%
U.S.-U.S.: 4%
Canada-Overseas: Outbound: 2%
Inbound: 0.2%
Total: 2%
U.S.-Overseas: Outbound: 20%
Inbound: 4%
Total: 24%

Seaway Cargoes

Commodity	% of Total Cargoes — St. Lawrence	Welland
Iron ore	30.4	25.5
Wheat	16.6	13.8
Coal	5.8	17.8
Fuel oil	5.5	3.0
Barley	5.6	5.0
Corn	4.6	4.2
Oats	3.6	3.0
Flaxseed	1.7	1.3
Soybeans, cake and meal	1.8	3.0
Crude oil	1.4	1.6
Newsprint	1.4	1.6
Pulpwood	1.4	1.3
Crushed stone	..	2.0
Gasoline	0.2	1.0
Package freight	2.5	1.4

Seaway Ports

Leading Canadian and U. S. ports handling Seaway traffic:

Port	Total Seaway Cargoes Handled ('000 tons)	Nationality
Hamilton	6,676	Can.
Montreal	5,581	Can.
Seven Islands	4,857	Can.
Ashtabula	3,876	U.S.
Toronto	3,240	Can.
Fort William	2,719	Can.
Chicago	2,208	U.S.
Toledo	1,851	U.S.
Cleveland	1,712	U.S.
Duluth	1,657	U.S.
Port Colborne	1,423	Can.
Port Arthur	1,411	Can.
Kingston	1,403	Can.
Prescott	1,313	Can.
Detroit	1,296	U.S.
Contrecoeur	1,083	Can.
Buffalo	915	U.S.

Company Reports

Financial

WESTERN SAVINGS AND LOAN ASSOCIATION, Winnipeg, total assets at Dec. 31, 1959 amounted to $98,727,326, were up 10.8% from $89,135,527.

Mortgage loans were up to $65,148,804 ($58,963,349 at Dec. 31, 1958). Cash was $5,578,829 ($4,446,395) and holdings of government and government guaranteed bonds $25,728,028 ($23,804,503).

Loans on savings certificates stood at $1,348,533 ($1,194,647), up 12.9%.

Savings certificates issued and accrued interest totaled $81,625,440 ($73,136,427). Capital, surplus, rest and reserves amounted to $16,697,022 ($15,751,605).

No income account is issued.

Building Materials

BUILDING PRODUCTS LTD., Montreal, consolidated net profit of $1,590,028 for year ended Dec. 31, 1959 was 18.2% higher than previous year's $1,345,135. Consolidation includes accounts of wholly owned subsidiary **Fibreboard Manufacturing Ltd.**

Sales increased 6.5% to a record high, depite lower volume of roofing sales.

Net additions to fixed assets totaled $2,350,120 and included the acquisition and improvement of the plants of Fibreboard, conversion of the Winnipeg paper machine to multi-cylinder operation and expansion of product facilities at Pont Rouge. The latter two of these projects are still under way.

A new company, **Bermico Products Ltd.,** is being formed jointly with **Brown Co.** of Berlin, N.H. to produce and market bituminized fibre pipe and electrical conduit under the trade mark "Bermico". Plant is being erected at Hamilton, adjacent to the company's plant.

Company expects that in 1960, new products and output from new facilities should more than offset the lower anticipated volume from old established lines.

CONS. INCOME ACCOUNT		
Years Ended Dec. 31:	1959	†1958
Net oper. income	$3,979,037	$3,242,582
Add: prof. sale f.a.	14,830	15,916
Net earnings	3,993,867	3,258,498
Less: Deprec. res.	962,336	803,638
Prov. for taxes	1,441,503	1,109,725
Net profit	1,590,028	1,345,135
Less: Com. divds.	870,091	870,091
Surplus for year	719,937	475,044

†Not consolidated.

Note: Maximum capital cost allowances, which exceed straight-line depreciation recorded in the accounts, have been claimed for tax purposes. The resulting reductions have been reserved for future income taxes.

Earnings per Share and Dividend Record:		
Common	$3.29	*$2.78
Paid	1.80	1.80
Shares o/s as at Dec. 31:		
Common, n.p.v.	483,384	483,384

CONDENSED CONS. BALANCE SHEET		
As at Dec. 31:	1959	†1958
Cash & s.f. invests.	$1,458,523	$2,265,318
Accts. rec. less res.	3,690,791	2,887,781
Inventories	3,939,966	3,773,498
Prepaid exps.	117,129	144,061
Total curr. assets	9,181,409	9,070,658
Invest. in sub.	33,000	.....
Fixed assets*	7,783,533	6,395,749
Total assets	16,997,942	15,466,407
Accts. pay.	1,602,207	1,173,518
Taxes pay.	772,347	349,702
Total curr. liab.	2,374,554	1,523,220
Gen. & replace. res.	800,000	800,000
Deferred tax	404,708	326,444
Capital stock	1,483,110	1,483,110
Surplus	11,935,570	11,331,633
*After depr. of	8,670,842	7,525,720

†Not consolidated.

Working capital	6,806,855	7,547,438

Lake Ontario Portland Cement Co., Toronto, net loss for the year ended Nov. 30, 1959 amounted to $375,408. For the previous year, net loss totaled $1,249,232.

Net sales amounted to $4,184,040 for the first full year of production and sale of cement. This represented approximately 75% of designed capacity of the plant. For the eight-month operating period in 1958, sales totaled $1,537,156.

Plant has been operating at full capacity since May 7, 1959. Clinker is being stockpiled during the winter to take care of anticipated summer sales.

Capital expenditures amounted to $325,650 and included installation of aggregate washing equipment, rail and truck unloading facilities at the Toronto bagging and distribution plant and a large bulldozer.

President G. H. Elliott points out that capital expenditures will not likely be of this size in 1960.

Company has added masonry (or mortar) cement to its line. This enabled company to secure additional dealers.

Increase in the production and sale of commercial aggregate is anticipated in 1960.

Stock options were approved on 38,000 shares to 14 key employees exercisable over 10 years.

Company looks forward to a year of progress in 1960.

CONSOL. INCOME ACCOUNT		
Years Ended Nov. 30:	1959	1958
Oper. profit	$320,740	*$555,813
Add: Preoper. exps. w/o	†82,115	207,881
Debt interest	737,982	445,257
Amort. deb. disc.	40,281	40,281
Net loss	375,408	1,249,232

†Credit; adjustment re prior years.
*Loss.

Shares o/s as at Nov. 30:		
5% Pref., $10 par	188,561	210,457
Common, $1 par	2,068,690	1,342,752

CONDENSED CONS. BALANCE SHEET		
As at Nov. 30:	1959	1958
Cash	$389,180	$191,483
Accts. rec. less res.	585,919	496,000
Inventories	849,067	701,870
Prepaid exp.	51,618	71,425
Total curr. assets	1,875,784	1,460,778
Deb. dis. unamort.	466,589	506,870
Other def. chges.	.....	376,167
Fixed assets†	15,032,162	15,313,648
Total assets	17,374,535	17,657,463
Due bank	.....	875,000
Accts., etc., pay.	761,575	881,803
Total curr. liab.	761,575	1,756,803
Funded debt	13,497,400	13,497,400
Capital stock	3,954,300	3,447,322
Contr. surplus	844,743	264,013
Less: Deficit	1,683,483	1,308,075
†After deprec. of	1,106,040	435,386
Working capital	1,114,209	‡296,025

‡Excess of curr. liabs. over curr. assets.

Public Utilities

NEW BRUNSWICK TELEPHONE CO., Fredericton, N.B., net profit of $2,038,097 for 1959 was 33.7% higher than 1958's $1,524,842.

Number of telephones in service increased by 5,400 (to 121,049); number of long-distance calls by 3%; operating revenue by 14.3%; local service revenue 13.3% and toll service 16%.

Authorized capital stock was increased to $40 million from $30 million.

Number of shareholders increased to 9,903 of which 7,623 are residents of New Brunswick.

On April 1, company assumed servicing of Northumberland and Kent counties formerly served by the government service.

Capital expenditures on new construction totaled $4,970,317. This was financed through the sale of debentures and stock in 1958.

Work program included expansion of long-distance facilities, dial conversions and extending service to new areas.

Microwave system between Saint John and Moncton was placed in service Dec. 12. A similar system between Moncton and Campbellton is expected to be completed by the end of 1960.

Another microwave between Saint John, Halifax and Sydney is to be constructed in co-operation with **Maritime Telegraph & Telephone Co.** It will be in service late in 1960.

President J. L. Black says circuit capacity of these systems can be increased at relatively low cost, strengthening company's future profit potential.

At the year end 75.2% of telephones were dial operated. Woodstock, Hartland and Florenceville will be converted by the summer of 1960.

INCOME ACCOUNT		
Years Ended Dec. 31:	1959	1958
	$	$
Gross revenue	13,831,017	12,096,068
Net earnings	7,299,872	5,862,084
Less: Deprec.	2,503,214	2,305,832
Amort.	4,951	4,723
All int.	807,610	787,522
Inc. tax	1,946,000	1,239,165
Net profit	2,038,097	1,524,842
Less: Dividends	1,542,192	1,430,179
Surplus for year	495,905	94,663
Times All Interest Earned:		
Before deprec. & amort.	9.04	7.44
After deprec. & amort.	5.93	4.51

Earnings per Share* and Dividend Record:		
Common	$0.79	$0.60
Paid	0.60	0.60

*Based on shares fully paid and issued.

Shares o/s as at Dec. 31:		
Common, $10 par	2,578,793	2,559,033

CONDENSED BALANCE SHEET		
As at Dec. 31:	1959	1958
Cash	*$1,582,970	$1,685,358
Accts. rec. less res.	1,984,435	1,930,755
Inventories	945,874	976,022
Total curr. assets	4,513,279	4,591,335
Misc. assets	212,825	251,763
Fixed assets	63,138,306	59,209,984
Total assets	67,864,410	64,052,183
Accts., tax., etc., pay.	2,056,340	1,533,624
Divds. pay.	386,819	383,855
Total curr. liabs.	2,443,159	1,919,479
Def. income tax	3,335,214	3,155,210
Def. credits, etc.	432,430	231,278
Deprec. res.	13,658,232	11,943,930
Funded debt	19,000,000	19,000,000
Prem. on cap. stk.	134,727	125,043
Capital stock	25,812,330	25,618,630
Capital surplus	93,230	93,230
Surplus	2,455,088	1,960,382

*Includes temp. cash invest. of $1,000,000.

Working capital	2,070,120	2,671,856

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Zeller's '59 Sales a Record: Sees Further Gains This Year

- *Zeller's plans at least 10 new stores in 1960 . . .*
- *Good pulp and paper outlook for MacMillan . . .*

By NESTOR

ZELLER'S LTD. had record sales during 1959, exceeding $53 million. These compare with sales of $49.6 million for the year ended Jan. 31, 1959.

First half sales were $23.4 million, up 10% on the same period a year earlier, and earnings before taxes were up 20.4%, at $1,018,000.

Full year-end figures should be announced in about a month.

Net profit for the first half—ending July 31—amounted to $540,260 or 58c per common share.

Toward the end of 1959 FP estimated that Zeller's earnings for the year could reach $2.40 per common share, up from $2.29 the year before.

As with all retailers, a great deal depended on Christmas business. The Christmas season started more quietly than had been expected—a trend reported by many retailers both in Canada and the U. S.

But final-week business set records and Zeller's reports the final Christmas total exceeded any previous year.

Expansion plans call for the opening of at least 10 new stores during 1960, making this a record expansion year for the chain. Of these stores eight will be in supermarkets and two in downtown localities.

Company will not reveal where the new stores are to go—save to say they are "right across the country."

Two openings are left over from last year's announced program. One of these is at Truro, N.S., where a store is due to open March 6, and the second at Pembroke, Ont., will open later in the year.

At present there are 70 Zeller's stores in operation. A fire destroyed a medium-sized outlet in Kitchener, Ont., Dec. 17.

During 1959 Zeller's sold nine of its properties on a leaseback arrangement, adding some $5 million to the company's $6,808,000 working capital. Company has not revealed the buyers, but a spokesman told FP they were a leading trust company and pension plan.

It is Zeller's policy to sell the rest of its properties in the months ahead and get out of the real estate field altogether. It is understood that the number of properties it still owns is small.

During 1957 and 1958, annual capital expenditure averaged $1.8 million. The 1959 figure was somewhat lower. However, it is expected that this year such expenditures will reach a new high.

Zeller's is optimistic about the retail outlook for the coming year. A steady increase in sales is predicted.

At recent market price of $32⅛, common stock is 15% above UV level ($28), could rise 40% before reaching OV level ($45). Price is 13.4 times estimated 1959 earnings of $2.40 per share. Yield is 3.74% at indicated annual dividend rate of $1.20 per share. Price this year has ranged between a high of $33, a low of $32.

• • •

MACMILLAN, BLOEDEL & POWELL RIVER LTD. (formerly **Powell River Co.**) was officially merged with **MacMillan & Bloedel Ltd.** as of Jan. 1, 1960. At end of January, all but 8% of MacMillan & Bloedel's class A and 3.5% of its class B shares had been exchanged for shares of the new company.

Powell River's results for 1959 have not yet been published. Based on first half operations, net earnings of around $1.15 per share have been estimated for the full year (vs. 91c in 1958).

It is expected Powell will report record newsprint output of some 420,000 tons for the year compared with 1958's strike-affected 359,575 tons and previous record of 402,783 tons in 1956.

A pro-forma summary in the prospectus detailing terms of the merger placed combined earnings of the two companies for 1958 at 87c per share. For the first six months of 1959, combined earnings were estimated at 65c per share.

An important aspect of the merger is the extent to which the two companies complement each other. Powell River's major production is newsprint; its lumber production is mainly with cedar and specialty woods. MacMillan & Bloedel has large fir lumber production, plus plywood, newsprint, kraft pulp and paper, laminated products and doors.

Combined newsprint capacity of the two firms is 740,000 tons, a little less than 10% of total Canadian capacity.

Company is considering construction of a mill at Bend, Oregon, for **Brooks-Scanlon Inc.**, in which it may acquire 51% voting control for $11 million. Preliminary estimates place cost of the projected 100,000 tons annual capacity pulp or paper mill at $30 million. Method of financing construction has not yet been announced; it may involve debt or equity financing for company or Brooks-Scanlon, or for both.

Studies on a proposed newsprint mill in Arizona are continuing. Work is proceeding on testing wood species, availability of supply and possible arrangements with the U. S. Forest Service. Present estimated capacity is 60,000 tons annually.

Outlook for the Canadian pulp and paper industry is for a record year in 1960. An expected rise of 6% or more in gross output is likely to reflect increased production tonnage more than higher prices.

Newsprint output may reach a record 6.6 million tons (6.4 million in 1959).

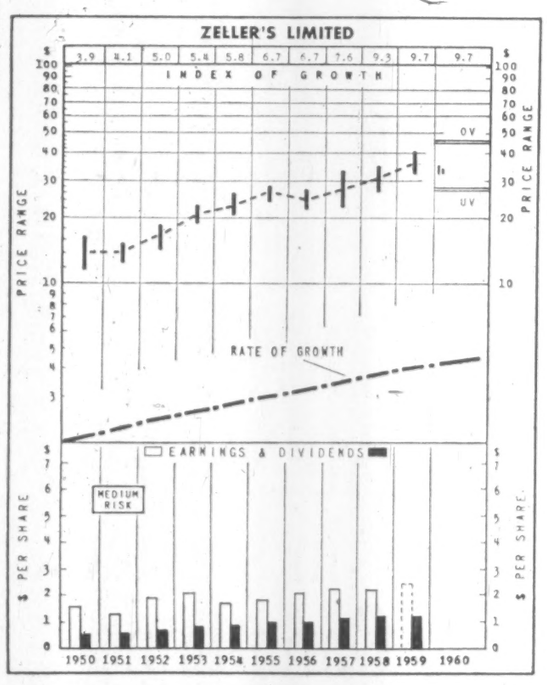
Lumber and plywood sales will depend in large measure on the level of housing construction activity both in Canada and the U. S. For both Canada and the U. S., housing starts are expected to be 10% to 15% below 1959 levels.

Initial dividend of 15c per share payable March 15 has been declared by the new company. Indicated annual rate is the same as Powell River's 1959 rate of 60c per share but represents an increase for former MacMillan & Bloedel class B shareholders (new rate is equivalent to $1.40 on the class B shares vs. $1 regular rate in 1959).

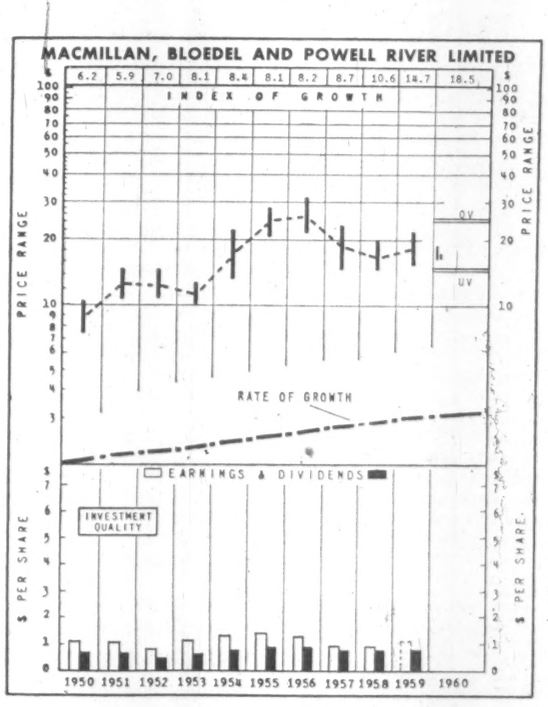
In addition, Powell River shareholders received 15c extra last year, MacMillan & Bloedel class B shareholders, 40c.

At recent market price of $16, common stock is 7% above UV level ($15), could rise 113% before reaching OV level ($34). Price is 18.4 times 1958 pro-forma earnings of 87c per share. Yield is 3.75% at indicated annual dividend rate of 60c per share. Price this year has ranged between a high of $18½, a low of $15½.

ZELLER'S LIMITED



MACMILLAN, BLOEDEL AND POWELL RIVER LIMITED



How to Read Nestor's Special Stock Charts

INDEX OF GROWTH: The rate at which the value of the equity behind the stock is doubling as determined by the growth rate at which it entered the year. A figure of 5.6 for the present year would indicate that at its current growth rate the equity value is doubling every 5.6 years.

PRICE RANGE: The annual high, low and mean price. Monthly ranges for the current year.

UNDERVALUATION AND OVERVALUATION PRICE LEVELS: Shown by the narrow horizontal lines above and below the stock's price range indicating price at which the particular stock is adjudged as underestimating or overestimating its future rate of growth. A stock showing a fast growth rate will sometimes anticipate growth by two or three years. In this case it may not be so attractive a purchase relatively as some other fast-growing stock that is not anticipating its growth beyond the immediate present. Other factors such as rate of growth and investment quality will also enter into the comparison an investor will want to make.

Without these UV or OV levels a current quotation of, say, 55 or 75 would carry no significance regarding long-range value. The UV/OV levels also permit judgment as between one stock and another. They are not designated points of purchase or sale nor do they attempt to show what will be a stock's bottom or top figures in any given year.

RATE OF GROWTH: The rate as based on Nestor's tests at which the company is showing underlying or long-term growth. This will determine the price trend of the company's common stock over a period of years and in most instances the trend of dividend payments.

**Background and principles behind the selection by Nestor were discussed in a special article in FP, Jan. 10, 1953. A limited number of reprints are available on request.*

Here Are Imperial Bank New Staff Appointments

G. W. ADAMS, to be manager, Elbow Drive at 96th Avenue, Calgary.

J. B. AITKEN, to be manager, Seven Islands, Que.

J. A. ATTWATER, to be manager, Landis, Sask.

J. BILSLAND, to be manager, Bleury & Mayor, Montreal.

L. A. CONLON, to be accountant, Runnymede & Annette, Toronto.

E. J. EDMONDS, to be manager, Hamilton, Ont.

R. D. HEATON, to be manager, Wilson & Keele, Toronto.

R. A. HOLMES, to be accountant, King & York, Toronto.

H. B. HUSSEY, to be manager, Leaside, Ont.

L. A. LANGAN, to be manager, Hepburn, Sask.

J. P. LAROSE to be manager, Thetford Mines, Que.

J. A. LAWRENCE, to be accountant, King & Spadina, Toronto.

B. W. LEWIS, to be accountant, Kenora, Ont.

R. H. LOERZEL, to be accountant, Gimli, Man.

D. MacPHERSON, promoted to accountant, Yonge & Millwood, Toronto.

A. MacDOUGALL, to be an assistant inspector, Head Office.

A. A. MacKENZIE, to be a supervisor, Head Office.

G. S. W. MALCOLM, to be accountant, 8th Avenue West, Calgary.

J. N. McKENZIE, to be accountant, Eglinton & Oakwood, Toronto.

G. E. B. MORGAN, to be assistant manager, Yonge & Bloor, Toronto.

P. W. V. NYE, to be accountant, Dundas & Bloor, Toronto.

E. A. SANDER, to be accountant, Ponoka, Alta.

R. A. SCHOFIELD, to be accountant, Wellington & Ross, Ottawa.

D. B. SMITH, to be an assistant supervisor, Head Office, Toronto.

C. E. WORTH, to be accountant, 82nd Avenue and 99th Street, Edmonton.

Worth Noting

Financing agreements and changes in financing deals, major changes in capital, filing statements are listed as reported by the Toronto and Montreal exchanges, Ontario Securities Commission.

CONSOLIDATED BETA GAMA MINES, TSE filing statement in respect of underwriting of 200,000 shares at 10c a share with options granted on further 800,000 shares at 12½c a share; acquired option to purchase group of claims in Goldfields area of Saskatchewan which if fully exercised would cost $100,000.

CONSOLIDATED FENIMORE IRON MINES, TSE filing statement in respect of underwriting of 125,000 shares at 25c a share.

HYDRA EXPLORATIONS, TSE filing statement in respect of proposed acquisition of group of claims in Montbray township, Quebec, for consideration of $5,000 and 200,000 shares (90% pooled).

ISO MINES, agreed with **Noront Mining Co.** to spend $50,000 on exploration of Lamaque area claims receiving 500,000 shares of Noront as payment. In addition Iso has option to purchase 250,000 shares at 20c a share; agreement with some Noront shareholders gives Iso option on 325,000 shares at 10c a share after the exploration work completed.

NEW MYLAMAKQUE EXPLORATIONS, TSE filing statement covering underwriting of 100,000 shares at 75c a share with options granted on further 124,995 shares at 75c to 85c a share.

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Getting Ahead

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Check This List Of Tariff Changes

OTTAWA (Staff) — Another order-in-council has been passed by cabinet knocking down duties on things used by Canadian manufacturers and not produced in Canada.

Three new tariff items have been created to give special low rates.

In addition, 18 items of this type, already in existence, have been extended one or two years.

Orders-in-council of this kind are passed about three times a year.

They always reduce tariffs — the government has no order-in-council powers to increase them.

The usual reason for such changes is that some Canadian company is manufacturing a new product in Canada and requires material from outside the country.

Extensions are usually granted if no one comes forward, during the life of the item, to make the required material in this country.

If some one does, the item is allowed to expire.

Here are the new items, all running to Jan. 31, 1961:

● **No. 123d, frozen tuna loins** to make canned tuna:

Free under both BP and MFN rates. Formerly, frozen tuna loins entered Canada at 17½% and 22½% respectively.

● **No. 354e, aluminum molds** to make matrices for recapping tires:

BP free, MFN, 7½%. Formerly, the rates were 15% and 22½%.

● **No. 445v, materials and parts** for the manufacture of transistors:

Free under both BP and MFN rates. Formerly the rates were 15% and 20%.

One item, No. 445s, has been reworded and extended to Jan. 31, 1962.

The item used to read, "Glass bulbs to make TV cathode ray tubes," free under both BP and MFN schedules.

"Glass bulbs" has been changed to "Glass articles" and the rates are unchanged.

Eleven existing items have been extended another year, to Jan. 31, 1961:

▸ **No. 263d, sodium ethylene dibromide** and ethyl chloride to make tetraethyl lead, free and free.

▸ **No. 267d, crude petroleum** when imported by oil refiners to be refined in their own refineries, free and free.

▸ **No. 269b, unsulphonated alkyl aryl hydrocarbons** for use in making synthetic detergents, free and free.

▸ **No. 314a, graphite blocks** for making molds for casting wheels of railway vehicles, free and 5%.

▸ **No. 352g, cast bronze shells** to make rolls for paper-making machinery, 7½% and 7½%.

▸ **No. 427n, engines and axles** for the manufacture of self-propelled machinery, free and 7½%.

▸ **No. 428h, diesel and semi-diesel engines** to make rotary air compressors, power shovels and cranes, graders, scrapers and snowblowers, free and 7½%.

▸ **No. 438k, front and rear axles,** internal combustion engines and transmission assemblies for use in making motor trucks, free and 7½%.

▸ **No. 438p, parts of carrier head assemblies** for two-speed rear axles for motor vehicles, free and free.

▸ **No. 551g, alpaca yarn** to make pile fabrics, free and 10%.

◂ **No. 8801, liquefied propane gas** to make ethylene, free and free.

Six items have been extended another two years, to Jan. 31, 1962:

● **No. 203c, solutions of aniline dyes,** adapted for dyeing, for use in Canadian manufactures, free and free.

● **No. 203d, pigments** for use in the coating, coloring or printing of textiles, free and free.

● **No. 203e, coal tar bases** to make dyes for textiles, free and free.

● **No. 203f, coal tar bases** to make coal tar dyes, free and free.

● **No. 203g, dye solutions** containing methyl alcohol, to color coated surfaces, 5c gal. under both schedules.

● **No. 208h, paraphenetidian** for use in the manufacture of acetophenetidin, free and free.

Our Firms Win Fatter Share Of Bouncy Mobile Home Sales

Canadian manufacturers of mobile homes and travel trailers are shooting for a bigger share of our market this year.

The trend has been toward more manufacturing in Canada.

Last year, Canadian firms accounted for $15 million of the total retail sales value of $26.5 million — raising their proportion to 57-43 from the 1958 ratio of 50-50.

While recessional factors are blamed for a 1959 fall-off in sales of homes, the industry looks for a rising pattern this year — particularly by Canadian-made products.

The 7th annual Canadian Mobile Home Show will open next week at Exhibition Park, Toronto.

Sponsor, the Canadian Mobile Home Association, represents all sections of the industry, including mobile home owners.

Manufacturers design and assemble units, leaning on more than 100 supplier companies for materials and furnishings. There are over 300 dealers in mobile homes and travel trailers across Canada.

Shipments by Canadian firms last year came to over 4,000 units, up from 3,500 units the year before. Travel trailer sales soared 400%, but the drop in homes accounted for a 6% decline in total dollar value.

Actual Canadian output may be substantially higher, since only a nominal figure is estimated for non-member firms outside the association, Managing Director H. C. Hardy points out.

In the over-all market, sales last year were nearly 7,200 Canadian-made and imported units valued at $26.5 million.

That compares with 7,000 units valued at $32 million the year before.

Three Wells Highlights In Oil, Gas

Three important new oil and gas discoveries in widely separated areas highlighted the Western Canadian petroleum picture this week.

Two of the finds were in new areas; one represented an extension of an established field.

On the oil front:

Two successful wildcats have been completed on the 92,000-acre Morse River reservation directly southeast of the hot Swan Hills field in Alberta.

The reservation was purchased by a group headed by **Home Oil Co.** for $5,507,000 in 1958. The wells were 6 mi. apart.

The northern well rated 388 b/d through restricted choke. The southern well flowed oil to the surface without heading when tested, and appears equal to the Swan Hills well average, Home Oil says.

Interests in the spread is split Home Oil Co., 40%; **French Petroleum,** 40%; **Kern County Land Co.,** 15%; and **United Oils Ltd.,** 5%.

In gas:

Pacific Petroleums Ltd. has confirmed a new Mississippian gas discovery in the Pocketknife area of northeastern B.C.

In three drill stem tests the well flowed from 3.3 million cu. ft. daily to 8.3 million cu. ft. daily.

The new discovery is located on **Hudson's Bay Oil & Gas Co.'s** permit covering 24,581 acres.

Upon reaching contract depth, Pacific Pete and **Westcoast Production Co.** will earn a 25% interest.

The well, which is drilling deeper, is 30 mi. northwest of the Jedney-Bubbles, LaPrise area and some 2 mi. west of the Alaska Highway.

British American Oil has completed another important development well in the Pincher Creek gas field in southern Alberta.

During a test the well flowed at a stabilized rate of 35.2 million cu. ft. daily through a 3-in. tubing. The new well is 1¼ mi. southeast of the Pincher Creek 9-10 well.

Defence Contracts

Department of Defence Production awarded 62 contracts valued at $14.8 million in the first two weeks of January. Eleven contracts for aviation fuel, turbine fuel, lubricating oil and diesel fuel oil, accounted for over $6 million.

Imperial Oil Ltd., Ottawa, received seven of the contracts totaling $3,291,848 and **North Star Oil Ltd.,** Winnipeg, received one valued at $2,348,600.

Northern Electric Co., Ottawa, received two contracts, totaling $5,472,776, for airborne electronic equipment. Canadian Arsenals Ltd., Ottawa, received two contracts, amounting to $915,573 for ammunition.

Other large contracts went to **Avro Aircraft Ltd.,** Toronto, for aircraft armament equipment ($562,151); **Saint John Dry Dock Co.,** Saint John, for ship's repairs ($175,000); **Western Flyer Coach Ltd.,** Winnipeg, for buses, ($137,520).

The two largest contracts awarded by Defence Construction (1951) Ltd., in the first half of January were for work in connection with construction of a high speed wind tunnel at Uplands, Ont. **Canadian Vickers Ltd.,** Montreal, received one valued at $221,215 for manufacture and installation of a transonic section and model access platform; and **Bogue Electric of Canada,** Ottawa, received one valued at $126,592 for supply, installation and testing of group electrical controls.

Contracts, Department of Defence Production
Jan. 1-15, 1960

Contractor	Commodity	Value
Abercorn Aero Ltd., Montreal,	repair, overhaul, air-sea rescue equipment spares, marine safety equipment, pyrotechnics	$ 124,708
Alloy & Steel Fabricators of Canada Ltd., Toronto,	plumbing equipment	11,115
Ampex American Corp., Ottawa,	electronic equipment	19,634
Avro Aircraft Ltd., Toronto,	aircraft armament equipment	562,151
Bedard-Girard Ltd., Quebec, Que.,	rewiring steel crash boats	19,150
British American Oil Co., Toronto,	aviation gasoline	323,133
Canada Bread Co., Toronto,	bread	15,352
Canadair Ltd., Montreal,	aircraft ground handling equipment	42,756
Canadian Arsenals Ltd., Ottawa,	technical services, ammunition	981,298
Canadian General Electric Co., Toronto,	electronic tubes	33,806
Canadian Marconi Co., Toronto,	electronic tubes	18,630
Canadian Oil Companies Ltd., Toronto,	lubricating oil	80,031
Canadian Westinghouse Co., Hamilton, Ont.,	technical services, aerodrome lighting equipment, electronic tubes	108,358
Capo Polishes Ltd., Hamilton, Ont.,	web dressing	48,460
Chaseside Equipment Co. of Canada, Burlington, Ont.,	loaders	14,449
Collins Radio Co. of Canada, Toronto,	electronic equipment	66,953
De Havilland Aircraft of Canada Ltd., Toronto,	aero engine components	14,640
Frontenac Overall Ltd., St. Evariste Station, Que.,	clothing	16,685
General Motors Products of Canada Ltd., Oshawa, Ont.,	trucks	75,147
Gilbert & Co., Toronto,	medical supplies	11,671
Halifax Shipyards Ltd., Halifax,	docking, repairs to ship	18,000
Hercules Sales Ltd., Toronto,	packboards	77,032
Imperial Oil Ltd., Ottawa,	lubricating, diesel fuel oil, aviation turbine fuel, aviation gasoline	3,297,848
International Harvesters Co. of Canada, Hamilton, Ont.,	ambulances	18,617
Jarry Hydraulics Ltd., Montreal,	electrical equipment	13,833
Kelvinator Sales Corp., Rexdale, Ont.,	electric refrigerators	14,980
Kennebec Knitting Mills Ltd., St. Louis De Pintendre, Que.,	clothing	123,006
Lakeview Pure Milk Dairy Ltd., Barrie, Ont.,	dairy products	48,462
MEL Sales Ltd., Toronto,	radar test sets	20,750
North Star Oil Ltd., Winnipeg,	aviation turbine fuel	2,348,600
North West Sportswear Co., Toronto,	clothing	13,511
Northern Electric Co., Ottawa,	airborne electronic equipment	5,472,776
Parke, Davis & Co., Montreal,	medical supplies	15,680
Pioneer Parachute Co. of Canada, Smiths Falls, Ont.,	panel markers	28,088
Quebec Steel Products Ltd., Montreal,	ships' spares	11,903
Joseph Robb & Co., Montreal,	ships' spares	29,206
Saint John Dry Dock Co., Saint John, N.B.,	repairs to ship	175,000
R. P. Scherer Ltd., Windsor, Ont.,	medical supplies	26,941
Sicard Inc., Montreal,	repair, overhaul of standard commercial vehicles	86,000
Sperry Gyroscope Co. of Canada, Montreal,	technical study	84,027
Swift Canadian Co., Halifax,	meat	25,580
Welwyn Canada Ltd., London, Ont.,	establishment qualified source for manufacture computer resistors	49,986
Western Flyer Coach Ltd., Winnipeg,	buses	137,520
J. A. Wilson Lighting & Display Ltd., Toronto,	electric lanterns	19,839
Yarrows Ltd., Victoria, B.C.,	docking, refitting of ship	78,000

Contracts awarded by Defence Construction (1951) Ltd.,
Jan. 1-15, 1960

Contractor	Work	Value
Bogue Electric of Canada Ltd., Ottawa,	supply, installation and testing of group electrical controls, for high speed wind tunnel — Uplands, Ont.	$ 126,592
Canadian Vickers Ltd., Montreal,	manufacture and installation of transonic section and model access platform for high speed wind tunnel — Uplands, Ont.	221,215
E. E. Fox Plumbing & Heating Ltd., Welland, Ont.,	installation of heating system — Angus, Ont.	39,627
Sunley Electric Ltd., Edmonton,	power provisions and modifications to operations building — Cold Lake, Alta.	51,659
Warneke Decorating Co., Hamilton, Ont.,	fire-retardant coating within building — Clinton, Ont.	17,879

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says John Borshay, President of Borshay's Garage, Ltd., well-known taxi operator and founder member of the Diamond Taxi Association. "Best of all, they stand up and take the abuse of year 'round, two shift a day driving. They've already clocked over 200,000 miles without a major repair."

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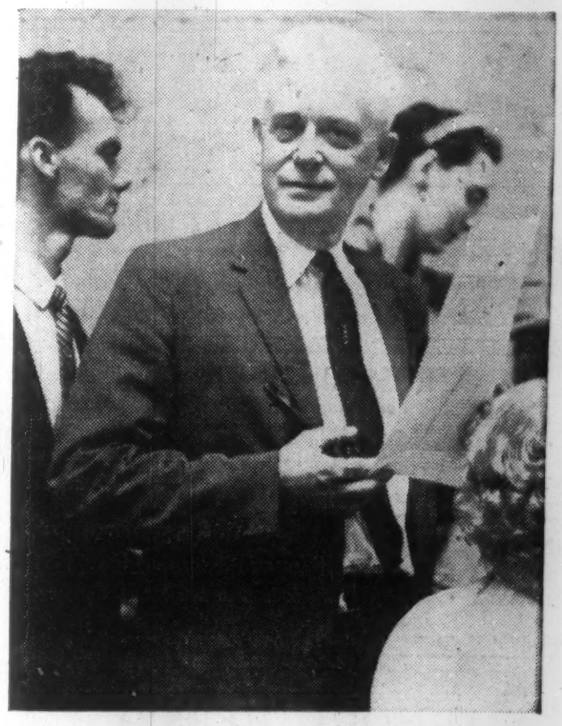

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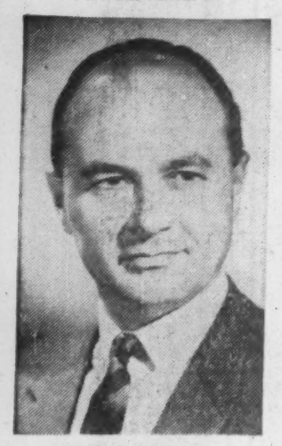
DOMINION BRIDGE APPOINTMENT



STANLEY W. PAPPIUS

The appointment of Stanley W. Pappius as sales manager of the Mechanical Division of Dominion Bridge Company, Limited, has been announced by W. G. H. Holt, general manager of this Canada-wide Division. Mr. Pappius was formerly associated with Canadian Vickers Limited for eleven years in various engineering and sales capacities.

ATHLETIC GUARDS

Athletic guards of high density polyethylene for regulation protective equipment replacing the older fibre-type leg, arm and shoulder pads, are manufactured by **Trans-Canada Plastics Ltd.** Plastic is supplied by **Canadian Chemical Co.**, Montreal.

Getting Ahead

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Company Reports

Textiles

SCYTHES & CO., Toronto, consolidated net profit of $58,738 for the year ended Nov. 30, 1959 ($9,410 the previous year).

President J. A. Scythes reports that sales were "almost identical" with last year and dollar unit values of lines, except waste, were well mantained.

Company has not yet benefited from the U. S. government adjustment on one item of the export subsidy program on raw cotton and waste by-products. This adjustment became effective Oct. 31, 1959.

Capital expenditures totaled $10,588.

CONSOLIDATED INCOME ACCOUNT

Years Ended Nov. 30:	1959	1958
Net earnings	$160,410	$41,965
Less: Deprec.	49,147	23,055
Tax prov.	58,525	9,500
Net profit	$58,738	9,410
Less: Pref. div.	12,875	13,297
Common div.	50,000	50,000
Deficit for year	4,137	53,887
Earnings per Share and Dividend Record:		
Preferred	$5.86	$0.89
Paid	1.25	1.25
Common	0.92	d0.08
Paid	1.00	1.00
Shares o/s as at Nov. 30:		
5% Pref., $25 par	10,028	10,528
Common, n.p.v.	50,000	50,000

CONDENSED CONS. BALANCE SHEET

As at Nov 30:	1959	1958
Cash	$94,256	$90,376
Accts., etc., rec.*	415,918	409,565
Life ins., c.s.v.	155,165	150,444
Investments	25,826	25,826
Inventories	846,512	806,967
Total curr. assets	1,537,677	1,483,378
Misc. assets	11,963	13,596
Fixed assets*	476,013	498,986
Total assets	2,025,653	1,995,960
Due bank	.....	8,700
Accts & tax pay.	232,876	179,921
Divds pay.	15,665	15,790
Total curr. liab.	248,541	204,411
S.f. res. pfd. sh.	5,122	15,422
Capital stock	353,200	365,700
Capital surplus	242,867	230,367
Earned surplus	1,175,923	1,180,060
*After depr. of	800,280	766,719
▲After res. of	10,850	11,275
Working capital	1,289,136	1,278,967

BRUCK MILLS LTD., Montreal, consolidated net profit for year ended Oct. 31, 1959 amounted to $176,124. For year ended Oct. 31, 1958, consolidated net loss totaled $92,229.

Due to loss carry forward, provision for income taxes has been reduced by approximately $67,000.

Sales increased 11.8% to $15 million. Increased sales enabled company to absorb increased operating costs.

Throughout most of the year, domestic and U. S. textile market has been firm but Japanese imports are causing serious concern, President G. L. Bruck reports. He hopes that negotiations between Canadian and Japanese governments will produce lower imports in 1960.

Company is taking advantage of relaxation of import restrictions from hard currency countries.

Capital expenditures totaled $275,152 and included installation of some cost saving equipment.

Net profit of associated company, **Bruck Mills (Australia) Ltd.**, for year ended June 30, 1959 was reduced to $244,800 from $493,428. As a result, dividends of the subsidiary have been lowered from 12½% to 8%.

CONS. INCOME ACCOUNT

Years Ended Oct. 31:	1959	1958
	$	$
Sales	15,010,868	13,421,459
Oper. inc.	564,632	284,152
Add: Inv. inc	67,646	74,058
Net earnings	632,278	358,210
Less: Deprec	421,154	440,584
Inc. tax	135,000	9,855
Net prof. & surp.	176,124	▪92,229
▪Loss & deficit.		
‡Reduced by approx. $67,000 due to prior years' losses.		
Earnings per Share and Dividend Record:		
Class A†	$1.41	d$0.74
None paid.		
Class B†	0.10	d0.97
None paid.		
†Before participation; no earnings available for participation.		
Note—Class A dividends in arrears $6.30 per share as at Oct. 31, 1959.		
Shares o/s at Oct. 31:		
Class A, n.p.v.	125,000	125,000
Class B, n.p.v.	250,000	250,000

CONDENSED CONS. BALANCE SHEET

As at Oct. 31:	1959	1958
	$	$
Cash	$64,883	$55,405
Accts. rec. less res.	2,307,391	2,272,204
Life insur., etc.	39,123	32,591
Inventories	4,137,594	4,385,394
Total curr. assets	6,548,991	6,745,594
Misc. assets	699,861	694,588
Fixed assets*	2,577,985	2,750,372
Total assets	9,826,837	10,190,554
Bank loan	2,410,000	2,765,000
Accts., tax., etc., p.	1,146,218	1,098,401
Total curr. liab.	3,556,218	3,863,401
Term bank loan	560,000	720,000
Def. acct. pay.	106,137	106,137
Conting. res.	400,000	420,000
Capital stock	787,500	787,500
Capital surplus	750,006	809,353
Earned surplus	3,666,974	3,484,163
*After depr. of†	8,593,173	8,193,180
†Includes $1,248,027 in 1959, $1,203,529 in 1958, res. for amort. of appraisal apprec.		
Working capital	2,992,773	2,882,193

Iron and Steel

N. SLATER CO., Hamilton, Ont., consolidated net profit of $494,003 for year ended Oct. 31, 1959 was 3.7% lower than previous year's $512,846.

Over-all sales were maintained, President C. W. Cassels reports.

Inventories were increased to ensure satisfactory supplies during the steel strike.

Capital expenditures amounted to $243,660 and included the 10,000 sq. ft. addition to the Hamilton plant. For 1960, capital commitments total $700,000 for further expansion. These will be entirely financed from cash resources.

Quarterly common dividends have been increased to 30c per share and an extra dividend of 25c per share was paid Feb. 1, 1960.

CONS. INCOME ACCOUNT

Years Ended Oct. 31:	1959	1958
Net oper. inc.	$1,128,358	$1,107,734
Add: Prof. on sale assets & secs.	38,963	17,316
Net earnings	1,167,321	1,125,050
Less: Deprec.	195,269	187,740
Income taxes	478,049	424,464
Net profit	494,003	512,846
Less: Pref. divd.	15,160	17,916
Com. divds.	217,500	150,000
Surplus for year	261,343	344,930
Earnings per Share and Dividend Record:		
Pref.: Earned	$69.08	$71.72
Paid	2.12	2.12
Com.: Earned	3.19	3.30
Paid	1.20+0.25	1.00
Shares o/s as at Oct. 31:		
Pref., $50 par	7,151	7,151
Common, n.p.v.	150,000	150,000

CONDENSED CONS. BALANCE SHEET

As at Oct. 31:	1959	1958
Cash	$240,456	$513,541
Accts. rec. less res.	916,195	706,004
Mkt. secs.‡	1,227,026	992,522
Inventories	2,091,062	1,856,428
Total curr. assets	4,474,739	4,068,795
Misc. assets	148,471	74,218
Fixed assets*	1,774,917	1,735,433
Total assets	6,398,127	5,878,446
Total curr. liab.	1,066,105	807,767
Invent res.	.....	500,000
Capital stock	1,357,550	1,357,550
Capital surplus	133,883	133,883
Earned surplus	3,840,589	3,079,246
*After depr. of	2,344,800	2,157,568
‡Market value	1,236,259	992,000
Working capital	3,408,634	3,261,028

ALBERTA PHOENIX TUBE & PIPE LTD., Edmonton, net profit of $92,806 for year ended Sept. 30, 1959 was 34.5% higher than previous year's $69,002.

Sales decreased 25%. Increased profits reflect more efficient operations, President F. M. McMahon states.

While company increased its percentage of the market in Alberta and Northeastern British Columbia, production rate at the mill was reduced in August.

Capital expenditures totaled approximately $150,000. Transition rolls for forming steel in a continuous action, on which company has applied for patents, were installed by the company.

Studies are under way with regard to hydrogen sulphide stress corrosion on several types of pipe.

Company anticipates improved sales in 1960.

INCOME ACCOUNT

Year Ended Sept. 30:	1959	1958
Sales	$6,022,357	$8,239,015
Operating exps.	5,006,438	7,223,162
Net earnings	1,015,919	1,015,853
Less: Depreciation	535,493	533,917
Bond & deb. disct.	23,033	26,246
Funded debt int.	364,587	386,688
Net profit	92,806	69,002
Note — No provision has been made in the accounts for income taxes; the amount of $50,000 in 1959, $38,000 in 1958, otherwise payable in this respect has been offset by claiming for tax purposes deprec. greater than that recorded in accts. & other charges.		
Earnings per Share and Dividend Record:		
Common	$0.13	$0.10
None paid.		
Shares o/s at Sept. 30:		
Common, 1c par	700,000	700,000

CONDENSED BALANCE SHEET

As at Sept. 30:	1959	1958
Accts. rec.	$622,903	$1,627,359
Inventories	2,684,863	1,438,335
Prepaid exps.	32,287	32,947
Total curr. assets	3,340,053	3,099,141
Deferred chgs.	143,614	170,821
Fixed assets*	4,604,814	4,988,334
Total assets	8,088,481	8,258,296
Due bank	901,427	143,023
Accts. & taxes pay.	267,111	1,034,673
Bond & debent. int.	143,974	36,437
Funded debt instal.	239,000	350,000
Total curr. liabs.	1,551,512	1,564,133
Funded debt	5,800,000	6,050,000
Capital stock	7,000	7,000
Capital surplus	48,000	48,000
Earned surplus	881,969	589,163
*After deprec. of	1,558,716	1,023,223
Working capital	1,788,541	1,535,008

Paint

BRANDRAM-HENDERSON LTD., Montreal, consolidated net profit of $56,069 for year ended Sept. 30, 1959 was 37.6% lower than previous year's $89,806.

Sales increased 7.7% and gross profit per dollar of sales increased 1%.

Preliminary opening expenses for new warehouses in Kingston, Jamaica and Fort William, Ont. increased selling expenses.

Canadian Industries Ltd. has purchased 97% of outstanding common stock of the company, which was held by **Brandram-Henderson Holdings Ltd.** (FP, Jan. 9). Board of directors in the annual report, recommend acceptance of a similar offer made to remaining shareholders.

CONSOLIDATED INCOME ACCOUNT

Years Ended Sept. 30:	1959	1958
Net earnings	$295,530	$301,732
Less Deprec.	129,897	96,836
Inventory w/o	29,308	18,718
Bond interest	43,022	45,088
Amort. of bond disct. & exp.	7,234	6,906
Income taxes	30,000	44,378
Net profit	56,069	89,806
Less: Com divds	50,000	50,000
Surplus for year	6,069	39,806
Times Interest Earned:*		
Before deprec.	6.70	6.54
After deprec.	3.68	4.39
*After amortization of bond discount and exp		
Earnings per Share and Dividend Record:		
Common	$1.12	$1.80
Paid	1.00	1.00
Shares o/s as at Sept. 30:		
Common, n.p.v.	50,000	50,000

CONDENSED CONS. BALANCE SHEET

As at Sept. 30:	1959	1958
Cash	$86,121	$81,159
Accts. rec.*	1,316,985	1,278,643
Inventories	1,002,277	939,561
Prepaid exp.	146,043	132,014
Total curr. assets	2,551,426	2,431,377
Deferred chgs.	46,518	70,406
Def. accts. rec.	9,545	13,045
Investments	13,961	13,961
Cash with trustee	25,375	8,283
Fixed assets	2,655,020	2,549,214
Total assets	5,301,845	5,086,286
Bank loan	550,000	600,000
Accts. & tax pay.	1,141,595	779,928
Bond & debent. int.	13,816	17,088
Total curr. liabs.	1,707,411	1,397,026
Due parent co.	.....	44,043
Prepaid rentals	18,220	10,880
Notes pay.	152,148	161,127
Funded debt	909,000	968,000
Capital stock	315,214	315,213
Capital surplus	1,352,015	1,352,015
Earned surplus	847,837	837,982
*After res. of	54,297	55,103
†After deprec. of	1,227,612	1,156,497
Working capital	844,015	1,034,351

GENERAL PAINT CORP. OF CANADA, Vancouver, net profit of $149,286 for year ended Oct. 31, 1959 was 39.7% higher than previous year's $106,876.

Considering the stiff competition and strikes in British Columbia, increased profits were "very gratifying", President T. W. Ayres reported.

Sales increased substantially. Customer acceptance of the newly formulated Monamel Exterior paint accounts for its sale increase.

The Mona-matic colorant dispensing machine introduced during the year was well received by dealers.

INCOME ACCOUNT

Year Ended Oct. 31:	1959	1958
Net earnings	$368,635	$259,544
Less: Deprec.	66,467	53,471
Funded debt int.	16,164	17,795
Taxes	136,718	81,402
Net profit	149,286	106,876
Less: Cl. A divds.	9,600	9,600
Cl. B divds	74,460	35,550
Surplus for period	65,226	61,726
Times Funded Debt Interest Earned:		
Before deprec.	22.81	14.59
After deprec.	18.69	11.58
Earnings per Share and Dividend Record:		
Class A: Earned	$10.04	$6.68
Paid	0.60	0.60
Class B: Earned	2.32	1.64
Paid	1.25	0.60
Shares o/s at Oct. 31:		
Class A, n.p.v.	14,865	16,000
Class B, n.p.v.	60,385	59,250

CONDENSED BALANCE SHEET

As at Oct. 31:	1959	1958
Cash	$26,765	36,010
Accts. rec. less res.	518,317	468,328
Inventories	538,586	497,310
Prepaid exps.	18,752	10,022
Total curr. assets	1,102,420	1,011,870
Invest. in oth. cos.	21,901	21,901
Life ins., c.s.v.	33,585	30,237
Land	100,938	100,938
Plant & equip †	450,456	411,923
Total assets	1,709,100	1,576,869
Bank loan	237,000	134,000
Accts., etc., pay.	228,759	277,534
Taxes pay	91,880	40,100
S.f. due 1 yr.	14,500	26,500
Total curr. liabs.	572,139	478,134
Funded debt	256,000	283,000
Capital stock	150,500	150,500
Earned surplus	730,461	665,235
†After deprec. of	355,245	298,133
Working capital	530,281	533,736

Financial

COMMERCIAL FINANCE CORP., Toronto, net profit of $101,121 for 1959 was 7.3% higher than 1958's $94,214.

Capitalization was changed by creation of 200,000 non-cumulative redeemable preferred shares, $1 par, and the reclassification of 20,000 npv shares as common stock. The preferred as well as the common stock are entitled to one vote per share.

Purpose of the new stock issue is to permit distribution of tax free dividends, President N. F. Petersen reported.

INCOME ACCOUNT

Years Ended Dec. 31:	1959	1958
Net earnings	$116,297	$108,235
Less: Admin. & gen. exps.	13,976	13,021
Inc. taxes	1,200	1,000
Net profit	101,121	94,214
Dividends	89,945	62,957
Surplus for year	11,176	31,257
Earnings per Share and Dividend Record:		
Common	$5.62	$5.23
Paid	5.00	2.00+1.50
Shares o/s as at Dec. 31:		
Common, n.p.v.	18,005	18,005

CONDENSED BALANCE SHEET

As at Dec. 31:	1959	1958
Dep. with trust co.	$36,427	$45,330
Int. & divds. accr.	9,013	9,737
Mktble. secs.*	1,524,909	1,490,559
Total assets	1,590,349	1,545,826
Accts., tax., etc., pay.	4,295	3,845
Divd. pay.	62,962	44,970
Capital stock	180,050	180,050
Capital surplus	38,322	38,322
Earned surplus	1,304,720	1,278,639
*Market value	2,293,071	2,137,348

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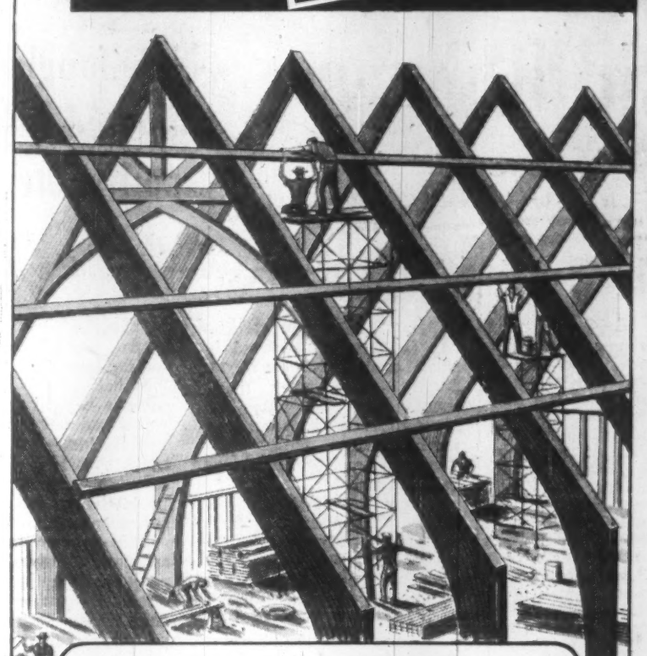

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	1959	1958
Insurance in Force (Net)	$261,364,000	$231,656,206
New Business (Net)	45,000,000	36,000,000
Total Income	7,775,345	6,994,883
Assets	37,364,219	34,771,360
% of Assets in Mortgages	39.9%	37.6%
% of Assets in Bonds	47.4%	49.2%
Paid to Living Policyowners & Beneficiaries	2,250,878	2,118,154
Surplus, Capital & Contingency Reserves	3,689,086	3,327,469
Net Interest Earned	5.04%	4.81%

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1960 WARNING

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ANNOUNCEMENT

FORD OF CANADA

GEORGE A. ATKINS

Appointment of George A. Atkins, of Toronto, as assistant general manager, Oakville operations, Ford Motor Company of Canada, Limited, is announced. Mr. Atkins was formerly director, production planning and control, manufacturing staff, Toronto. He joined the company as a clerk in Windsor in 1935. His appointment was announced by James K. Ronson, general manager, Oakville operations, Ford of Canada.

Letter from London

New-fangled bids in bridge opposed in Montreal, but spoil subterfuge in U. K.

By ADELPHI

THE sudden suggestion (apparently approved in official circles) that the Royal Family, at a given date, should bear the name of Mountbatten - Windsor, was received here with what might be described as modified rapture.

It is almost forgotten that Prince Philip only adopted the name of Mountbatten — which was his mother's surname — when he became a naturalized British subject in 1947.

It was his grandfather, Prince Louis of Battenberg, who anglicised his name at the insistence of King George V.

In 1952 when the Queen came to the throne, it was decided—in accordance with a wish expressed by George VI — that the Queen and her descendants should continue to use the family name of Windsor.

Yet today we are faced with a proposal which would be a complete turnabout.

In 1917 when George V took the name of Windsor everyone rejoiced because nothing could be more English — and I don't mean British.

At all levels of society, from the poor dukes to the rich manufacturers, there is deep dislike of tinkering with the constitution.

Admittedly the proposed alteration could not take place for many years but the British have a sense of the centuries which keeps them wise in their time. The general feeling is that the whole affair is unfortunate and that it should not have been put forward on the very eve of the birth of a royal baby.

* * *

MACMILLAN the Immaculate is back on his native soil and was given a full throated roar of welcome that stretched from Land's End to John o'Groats.

Those who know the Prime Minister intimately say that his air of calm composure is a façade and nothing more.

Actually he is tense and nervous before he addresses the House but he no doubt consoles himself with the old adage that if a politician is not nervous before he speaks his audience will be nervous before he ends.

It is equally obvious that an actor, a dancer, or a company chairman must be more wrought up than his audience or his shareholders at an annual meeting.

* * *

ONE OF Macmillan's domestic problems is the growing unpopularity of his premium bonds, which he inaugurated when holding the office of Chancellor of the Exchequer.

When they were first launched there was wide enthusiasm. Here was a gamble where you might win but you could not really lose.

Admittedly the bonds did not bear interest and to that extent the bonds merely retained their basic unchangeable value.

Another factor was the undoubted fact that the stock exchange has been offering a gamble in which it was almost impossible to lose.

The long upward trend of prices, plus the fact that capital gains do not invite taxation, have reduced Mac's bonds to a very low level of popularity.

In short, the only chance for the survival of the premium bonds would be a real stock market decline.

* * *

NO ONE could ever imagine Macmillan as No. 2 in any setup. In rebellion, in opposition or in support of his own party, he always walked alone.

In the early weeks of his premiership he used to spend quite a lot of time in the smoke room where no stranger dare set foot, but he is said to have given up even that degree of fraternization.

Perhaps he wanted to avoid the suspicion that he was emulating Winston Churchill whose cigars were almost part of the furniture in the smoke room.

* * *

EVERY NOW and then in this shadowed world something happens that fortifies one's faith in human nature.

An example of this is Britain's volunteer contribution to the World Refugee Year. The target set for Britain was £2 million but with four months still to go that total is passed.

So the organizers have doubled the original figure. The new target is £4 million and the men working on the job are confident that they will reach that splendid total.

In actual money value this will mean one shilling and eight pence per head of population.

* * *

IN THE prevailing paradox of British affairs I must ask you to note the strange case of the Electrical Trades Union.

Here is a large and powerful organization, which is openly and flamboyantly communist.

Now there are open rumors, duly publicised in the press, that for more than 12 years the union has indulged in "procedural malpractice."

Recently the communist general - secretary was duly reelected, but the charge is made that out of 680 branches that voted nearly 100 were disqualified.

The ugly fact remains that this communist union occupies a key position, which can paralyse industries that have no relation to it whatsoever.

It may be that public opinion will force the TUC or even the government to take action before long.

But as an example of impotence it would be hard to excel the dithering and inaction of the normal, decent trade unions of Britain.

* * *

IT MAY SEEM that in this column from London I am over-emphasizing the irritations and difficulties of contemporary British existence. But you cannot blame the hand for what the mirror reveals.

Thus I must report to you that some of the bridge clubs in London are saying that the great old game is now so ridden by conventions that it would save time if the opening player would say outright: "I have three aces, two kings and a singleton."

An example of this is the four no trumps bid which asks the partner for his or her aces and then kings.

I suppose that a weak player can survive longer if he sticks to conventions, but it seems a pity to alter the game to a point where there can be no subterfuge nor false bid lest it break the new code.

I have been told that in the clubs of Montreal there is a sturdy opposition to these new-fangled bids but I doubt if even Montreal will be able to hold out against it.

* * *

THAT RESPECTABLE casino known as the stock exchange is in a cautious mood.

There is a lot of money waiting for reinvestment by people who took their profits during the long and happy rise in equities, but they are wondering if the railway troubles will start general trouble on the industrial front.

Inevitably, and quite rightly, the stock exchange has become big news and by no means is it confined to professionals.

The women have taken to the game to such an extent that a female tea party sounds like a broker's office.

Their talk is no longer of clothes but of equities. Their idea of romance is to see a share soar like a rocket.

Otherwise this tight little island is sound at heart, but it is becoming tired of the lingering winter.

To the imaginative people at Canada Dry, the introduction of Control-Pak, a waterproof corrugated board, suggested interesting possibilities. When shipping their products to mines, logging camps, and other northern sites they found that their normal wooden crates incurred heavy freight charges . . . and that the crates were seldom returned anyway. They experimented with Control-Pak, found that it would withstand weather, that the weight was only one-tenth that of wood, and the cost of the carton about one-third.

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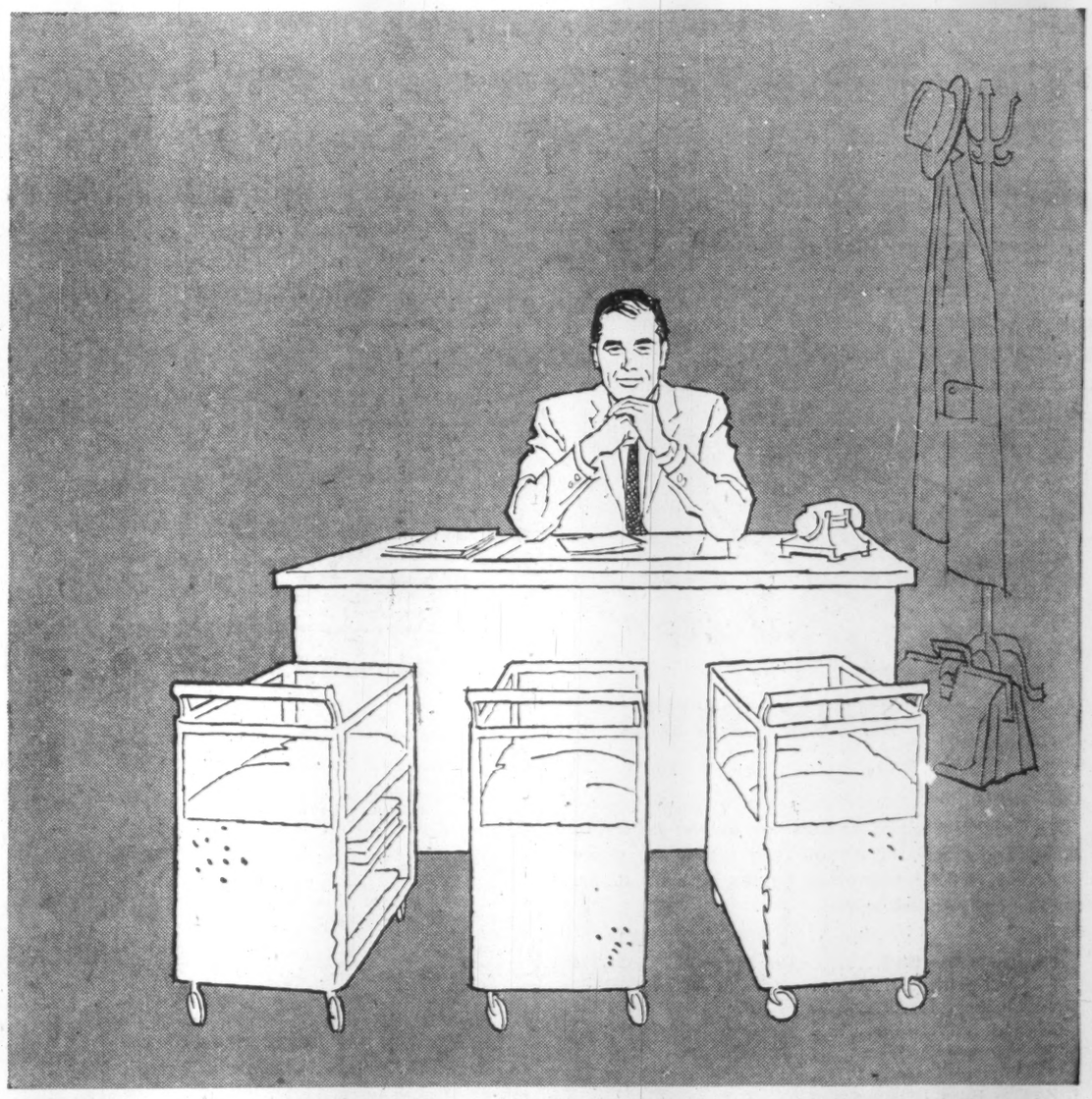

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Our Aid-Refugee Drive Bogged Down in Hassle

Here's why the federal government and private charities are arguing . . .

By LESLIE WILSON

OTTAWA (Staff) — A major part of Canada's contribution to World Refugee Year has bogged down in a complicated hassle over who should be responsible for what.

On one side:

The federal government.

On the other:

Canada's private charities.

The Canadian Welfare Council, which represents 425 organizations interested in social welfare, will call on the cabinet in the next few days to try to shift the government position.

The Canadian contribution to World Refugee Year, which ends June 30, consists of two parts:

- **The government has admitted** 100 European refugees with TB to Canada, with their families, and has undertaken to pay travelling expenses, help the families get established, and pick up the tab on treatment costs in Canadian hospitals and sanatoria, for life, if necessary.
- **The government will waive** normal immigration requirements on sick or handicapped refugees, if private charities will "sponsor" them.

Part 1 of the program has worked out successfully.

Part 2 never got off the ground.

Eighty-four of the 100 TB cases under government sponsorship arrived at Christmas time, the others two weeks ago.

With the sick people, came 232 well dependents.

Part 1 has turned into a federal-provincial scheme.

The 100 TB cases are now in sanatoria in six provinces — New Brunswick, Nova Scotia, Ontario, Quebec, Manitoba and Saskatchewan.

All of the six except N. B. are absorbing full treatment costs and N. B. is splitting these with the federal government.

Not a single refugee has been admitted to Canada under Part 2 of the program because of the "sponsorship" requirement.

Some Canadian charities have organized campaigns to collect money to care for refugees in Europe.

It's expected that private Canadian contributions, which will go to the UN permanent agency for refugees, will amount to about $1 million.

Last week, 65 representatives of Canadian charities, plus some provincial and city delegates, met in Ottawa to see what could be done to bring additional sick or handicapped refugees to Canada.

The consensus:

- **The federal and provincial governments** should admit and sponsor additional TB refugees, extending the program beyond the end of World Refugee Year if necessary.
- **"Sponsorship" as defined in the original offer** is too heavy and too indefinite a burden for private organizations to bear.

These are the views which the Canadian Welfare Council will argue before the cabinet.

The government definition of the responsibilities of "sponsorship" by private charities includes:

- **Payment of traveling expenses,** providing accommodation and maintenance on arrival, and job-finding.

There is no time limit "to the period or to the extent of the responsibility assumed by the sponsors."

- "Acceptance of responsibility for the persons brought to Canada until they become eligibile for normal municipal or provincial social and welfare benefits."

There are some 10 kinds of social welfare benefits for which immigrants can qualify after they "establish residence" in a province and municipality.

The principal ones are unemployment assistance, old age assistance, blind and disability allowances, mothers' allowances, family allowances, hospital insurance and TB care.

All of these except family allowances are federal-provincial programs, administered by the provinces and open to "residents."

In some, municipalities pay a share and have a hand in administration.

The amount of time a family has to live in a province to "establish residence" varies.

For some Quebec programs, only Canadian citizens (five years' residence) are eligible.

Where the municipality is involved, residence requirements vary from city to city.

Amounts which a sponsor would have to pay would vary enormously according to where a refugee family settled, as well as to how much care its disabled or sick members required.

Last week's conference agreed that private charities and individuals should pay transportation costs for refugee families and help with settlement and job-finding.

But, said a resolution from the conference:

"The cost of health and welfare services until a refugee family can qualify for such services under public auspices cannot be predicted in advance.

"A private sponsor may not be able to afford, and should not be expected to undertake, such an unknown and potentially large liability."

The Canadian Welfare Council will ask the government either to work out agreements with the provinces under which privately-sponsored refugees would get welfare benefits as soon as they arrive or to pay these benefits itself.

New information on the health of the 100 TB refugees already admitted to Canada has prompted hopes here that some revision of the "sponsorship" requirement will bring the charitable agencies into the refugee program.

There are indications that:

- **Paying treatment costs** for the average TB refugee may not be a long or expensive proposition.
- **The proportion of TB refugees** who would require long sanatorium care is likely to be very small in any group from the European camps.

Selection of our 100 TB cases was left to the UN permanent agency for refugees because we didn't want to be accused of trying to pick only mild cases.

The 100 we got are considered to be a cross-section of the TB cases now in European camps.

We imposed only one stipulation:

One case per family. We wanted to bring in as large a number of well people as possible with every sick one.

The normal Canadian regulation for admitting people who have had TB says the disease must have been "arrested" (i.e. stopped) at least two years before they come to this country.

Other countries have the same requirement.

It means there are hundreds of people in the refugee camps who have been cured of TB but for immigration purposes are considered to have the disease.

Of the 84 TB cases who arrived in December, 12 turned out to have "arrested" TB. They have been discharged from hospital.

A further 16 will be out by March 1.

For almost all of the remainder, the outlook for cure is "very good," officials say.

Space in TB Sans

BEDS AND PATIENTS DEC. 31, 1958

	Patients	Bed Capacity*	Beds Set Up†	— Vacancies — Actual (Col. 3-Col. 1)	Possible (Col. 2-Col. 1)
Nfld.	472	650	622	150	178
P. E. I.	80	110	95	15	30
N. S.	483	891	835	252	308
N. B.	602	936	786	184	334
Que.	3,279	4,150	4,096	817	871
Ont.	2,736	4,280	4,196	1,460	1,544
Man.	799	996	955	156	197
Sask.	507	714	714	207	207
Alta.	661	946	935	274	285
B. C.	872	1,236	1,161	289	364
N.W.T.	148	326	260	112	178
Canada Tot.	10,739	15,235	14,655	3,916	4,496

*Beds which could be made up in existing space.
†Beds actually made up.

A physician who examined the 100 told FP:

"Canadian treatment facilities are far superior to those available in the camps.

"We have the latest antibiotic drugs and our sanatoria use the most modern treatment methods.

We can cure people here who might be sick for years in the European camps."

The government decided to concentrate on TB cases because of the large amount of empty bed space in Canada's 82 sanatoria and hospital TB units (see table on this page).

Latest figures available are for Dec. 31, 1958.

On that date, there were 10,739 patients on the books of TB hospitals.

They occupied only 74% of the beds actually set up.

Because these hospitals have so many empty beds, much space planned for beds is also left empty.

A standard hospital formula for calculating bed capacity by floor space shows that the 10,739 patients occupied only 70% of potential bed space.

Ontario, which has the largest number of TB beds, had only 65% of them occupied on Dec. 31, 1958.

Reason for the empty bed space:

Canada's TB treatment system was planned to take care of an expanding patient total.

But because of new drugs and treatment methods, the patient total has dropped year by year since 1953, when it reached a high of 16,051.

The "pool" of refugees from which our 100 TB cases were drawn consists of 20,000 people in 113 dilapidated camps in Austria, West Germany, Italy and Greece.

Almost all the adults fled from Iron Curtain countries during or after the war, and have been in the camps for 15 years.

Canada isn't the only country which has admitted TB refugees:

- **Sweden** (population 7.4 million) has admitted 611 TB and post-TB refugees, plus 910 dependents.
- **Denmark** (pop. 4.5 million) has admitted 84 TB and post-TB refugees, with 112 dependents.
- **Switzerland** — 11 TB cases, two dependents.
- **U. K.** — 39 TB and post-TB case, 60 dependents.
- **U. S. has admitted no TB cases,** but it has contributed $4 million for special projects for World Refugee Year.
- **Australia has undertaken** to absorb 3,000 refugees as a special contribution to World Refugee Year, instead of the usual 1,500.

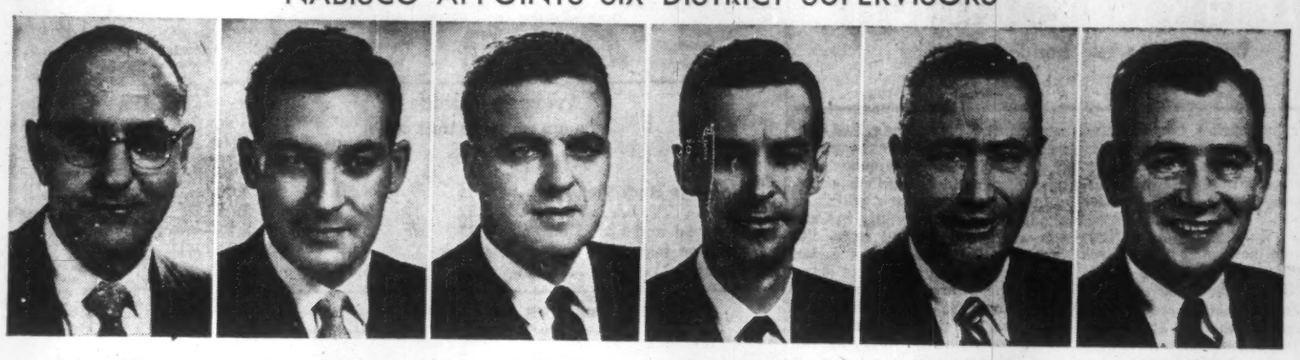
But there is no special provision for TB cases.

Australia classifies very broad categories of persons as "refugees."

Using the same kind of classification we took about 2,000 "refugees" last year, may take as many as Australia in 1960.

ANNOUNCEMENT

NABISCO APPOINTS SIX DISTRICT SUPERVISORS



R. C. MacKEAN — H. G. DUGGAN — I. WILLIAMSON — J. W. WRAY — E. E. CRACKNELL — C. B. VERY

Mr. A. J. Colden, Vice President, Marketing, Nabisco Foods Limited, announces promotions to District Supervisor for the following personnel: R. C. MacKean for the Maritimes; H. G. Duggan for Quebec; I. Williamson for Central Ontario; J. W. Wray for Western Ontario; E. E. Cracknell for Lakehead, Manitoba and Saskatchewan; C. B. Very for Alberta and British Columbia.

These promotions are in keeping with the continuing expansion of the newly consolidated Nabisco Foods Limited sales organization. This organization is responsible for the sale and distribution of the complete line of Nabisco cereals, Rose Brand Pickles, Jams, Olives, Dromedary Dates, and Milk Bone Pet Foods. These new appointments will further improve service to all accounts at all levels of distribution.

Belding Acquires Two Nylon Lines

MONTREAL (Staff) — **Belding Corticelli Ltd.** has acquired manufacturing rights and trade marks to two premium lines of ladies' full-length nylon hosiery formerly made in Canada by **Gotham Hosiery Co. of Canada Ltd.**

The two lines—"Gotham Gold Stripe" and "Gotham Onyx"—were acquired by Belding when Gotham ceased manufacturing operations at its St. Hyacinthe, Que., plant.

Gotham is a subsidiary of **Chadbourn-Gotham** of the U. S.

This brings to four the number of premium hosiery lines being produced by Belding.

Company's other premium stockings are marketing under the brand names "Corticelli" and "Christian Dior".

Sales of the former Gotham lines are being handled independently of Belding's other lines, company officials report.

ANNOUNCEMENT

CANADA LIFE OFFICER

H. T. C. TAYLOR, C.L.U.

The Canada Life Assurance Company announces that H. T. Crozier Taylor, C.L.U., has been appointed an Officer of the Company and is now Assistant Superintendent of Agencies. Prior to his present appointment he was Manager of the Company's Minneapolis Branch.

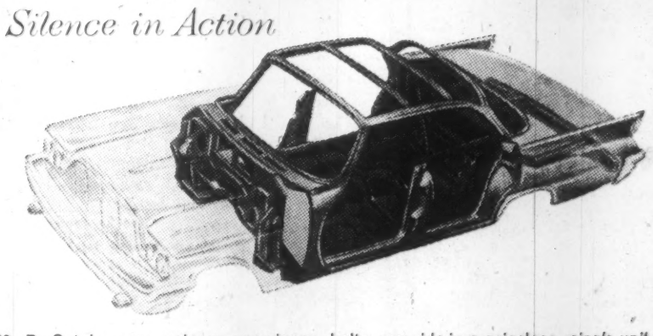
Success in Action

'60 DE SOTO

Adventurer

De Soto Adventurer . . . a quality product of Chrysler Engineering

Silence in Action



'60 De Soto's new unique one-piece "Unibody" construction brings a wonderful new era of silence to your driving. With the elimination of all body joints and bolts, you ride in a noiseless, *single-unit* fortress of steel. And because of seven separate anti-corrosive treatments, De Soto is *rust-proof* too!

Sales up over 40% for the car of the year

More beauty. *More* engineering features. *More* luxury inside and out. These are the reasons why, since it was introduced, the 1960 De Soto is more than 40% *up* in sales over the same period last year!

There's a feeling of success in commanding a '60 De Soto. In front of you lies a world of driving pleasure . . . behind you the envious, admiring eyes of those who watched you whisper by. Distance means nothing to the '60 De Soto. Miles vanish at the touch of your toe. And '60 De Soto Torsion-Aire ride smooths out the road wherever you drive.

Own a De Soto and enjoy the great feeling of command and success. Visit your local Dodge-De Soto dealer today.

Nothing says quality like '60 DE SOTO *Adventurer*

The magnificent car of the *Fabulous Sixties* from Chrysler of Canada

CDS-260A

SEE YOUR LOCAL DE SOTO DEALER

Market Comment

What stocks and bonds are doing and what prominent observers say

Never has such a concentrated market tumble been accepted with such investor equanimity. The 70-point index drop in the Dow-Jones industrials—equalled 10% (the T.S.E. industrials dropped 7% in the same period) —although increasing bearish talk has produced relatively little scare selling to date.

The fact is that most investors —and the top market authorities —look for a near-term turn, cannot see the decline continuing much more in the face of still good business prospects. Some business indicators, like new car sales, have been a little disappointing but then a 70-point drop in the D-J must now have discounted a good deal of this.

The termination of the six weeks gas export hearings with the virtual collapse of all organized opposition to export didn't produce a ripple in major gas export issues.

* * *

GEORGE C. ARMSTRONG; Canadian Business Service (Toronto)

The market decline which commenced on January 5 has now erased more than 10% from values in the New York market and 6¾% from the Canadian market. This is the first time in four years that the Canadian market has exhibited greater strength than the New York market.

It would be very helpful—and possibly comforting—if one could tell the precise level at which the market downtrend will be reversed. All that one can say is that we are now at the support levels of mid-September 1959 and earnings have improved in the interim.

Business is showing a tendency to level off—car sales have been slightly lower than anticipated, while housing starts may be somewhat disappointing. But capital expenditures are expected to rise. So it would appear that business should be well sustained.

Industrial stocks are selling at about 16¾ times earnings in Canada while the over-all composite Canadian Business Service index is selling at about 18 times earnings. These are not unrealistic values in comparison to the New York market which is selling at 15 times earnings. Due to the dividend tax credit, the Canadian market usually sells at a little higher price-earnings ratio than New York.

The bond market is in an uptrend. The stock market should be fairly close to the bottom of the range we envisage for the next year or so. Further weakness would seem to provide an opportunity to do some selective buying on a long term basis.

* * *

RICHARD LOCKE; Leggat, Bell, Gouinlock (Montreal)

Canadian equity prices have been subjected to protracted erosion in past months, to such an extent that some stocks are now selling close to levels established in late 1957. It is ironic that the Canadian market was the sole desultory performer in 1959, most of which was a period of surging share prices throughout the world.

The reasons for this lacklustre performance are legion and have been widely touted; in fact, a slower rate of economic activity with a concomitant decline in stock prices is so unanimously anticipated in the latter part of this year that a measure of skepticism is not unwarranted.

In any event, current corporate earnings reports make fairly cheerful reading and the outlook for the ensuing 10-12 months appears encouraging, although there is little to justify any unbridled enthusiasm.

Bank stocks have undergone a correction of some proportion, and look interesting at present prices, while some newsprints and utilities appear worthy of accumulation. In the meantime, the bond market continues to offer a wide choice of attractive compromises.

* * *

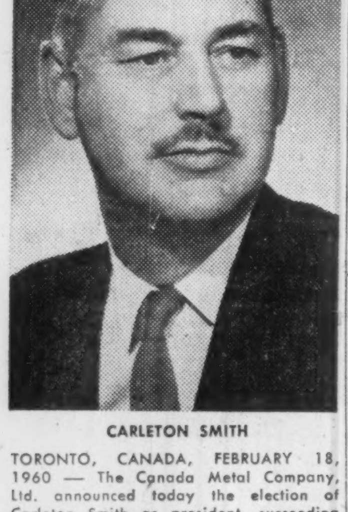
JOHN D. PARKINSON; F. H. Deacon & Co. (Toronto)

It is generally agreed that 1960 will not be a boom year. Steel mills and car plants may end the year at a lower production rate than when the year began. Industrial capital spending is likely to be directed towards new machinery and modernization of existing plants and procedures rather than completely new construction.

However, the majority of industry spokesmen predict a good year. Consumer spending remains high. Commercial construction planned is expected to more than offset reduction in housing. The relatively high cost of money continues to reveal that there is still a shortage of supply for all corporate and government needs. Fiscal policies designed to combat inflation are still in effect.

Although the stock market has a great deal of work to do, it is believed that it will end the year at higher than current levels. Not all stocks will perform well, but the opportunity exists to purchase high quality commons at reasonable prices such as Moore Corporation, Hiram Walkers, Abitibi, Labatts, Inter. Nickel, Consumers' Gas and B. A. Oil. For the income conscious investor, attention should be given to the preferreds.

ANNOUNCEMENT



CARLETON SMITH

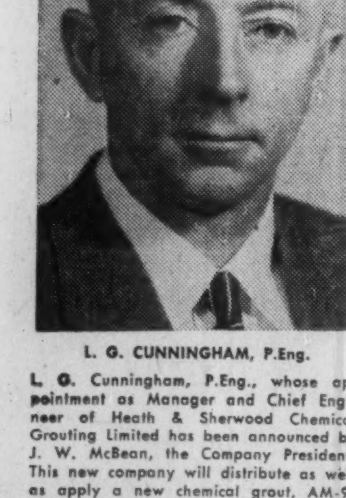
TORONTO, CANADA, FEBRUARY 18, 1960 — The Canada Metal Company, Ltd. announced today the election of Carleton Smith as president, succeeding James A. Taylor who has retired after forty-seven years of service.

Mr. Smith joined Canada Metal in 1933 at the Montreal plant. He became assistant plant superintendent in 1937 and three years later superintendent. In 1945 he was named assistant manager and in 1948 manager of the Montreal operations. Mr. Smith transferred to Toronto in 1955 upon his appointment as general manager of The Canada Metal Company, Ltd.

Mr. Taylor began his career with Canada Metal in 1913 at the Toronto plant. After serving in several production and administrative positions, he was transferred in 1930 to the Montreal branch and named manager. In 1936 he returned to Toronto, becoming vice president and general manager of The Canada Metal Company, Ltd. He was elected president of the company in 1944. Mr. Taylor served as a director of National Lead Company, New York, from 1939 until his recent retirement.

The Canada Metal Company, Ltd. manufactures fabricated lead products; lead oxides; lead and zinc alloys; die castings in aluminum, brass, magnesium and zinc; brass forgings and other brass and bronze products. The principal manufacturing operations of the company are at Toronto, Montreal, Winnipeg, Calgary and Vancouver. General offices are located at Toronto.

ANNOUNCEMENT



L. G. CUNNINGHAM, P.Eng.

L. G. Cunningham, P.Eng., whose appointment as Manager and Chief Engineer of Heath & Sherwood Chemical Grouting Limited has been announced by J. W. McBean, the Company President. This new company will distribute as well as apply a new chemical grout, AM-9, developed to control water infiltration into shafts, tunnels and mines. The product is expected to have broad applications in the fields of drilling and mining.

Price Earnings Ratios

RATIO OF MARKET VALUE TO EARNINGS OF THE 20 STOCKS COMPRISING THE TORONTO STOCK EXCHANGE AND INDUSTRIAL INDEX

EARNINGS PER SHARE	PRICE Feb. 12	RATIO Feb. 12	WEEK PREVIOUS	MONTH AGO
$51.65	$811.38	15.71	16.25	18.50

Average Yields

(COMPILED BY MOSS LAWSON & CO.)

	Feb. 12 %	MONTH PREVIOUS %	YEAR AGO %
114 Average Stock Yields	4.66	4.50	4.00
6 Banks	3.52	3.34	3.07
18 Preferred and "A" Stocks .	5.39	5.39	4.73
64 Common Industrials	4.31	4.09	3.65
26 Mining	5.28	5.15	4.56

Advances and Declines

Week Ended	Toronto Ups	Toronto Downs	Toronto No Change	Montreal Ups	Montreal Downs	Montreal No Change
Jan. 8	462	252	144	140	102	96
Jan. 15	338	412	151	80	162	127
Jan. 22	260	450	178	91	164	107
Jan. 29	201	492	193	62	184	117
Feb. 5	240	436	182	105	129	118
Feb. 12	213	485	179	88	149	132

Volume of Stock Sales

	Montreal	Toronto	Calgary	Vancouver	N.Y.S.E.	American
Feb. 15	505,500	1,755,000	40,115	125,048	2,780,000	1,170,000
Feb. 12	370,200	1,701,000	35,991	219,409	2,230,000	840,000
Feb. 11	473,200	1,826,000	38,775	212,369	2,610,000	810,000
Feb. 10	693,600	1,970,000	48,234	192,253	2,440,000	810,000
Feb. 9	352,200	1,636,000	44,314	68,675	2,860,000	770,000

Significant Investors' Index Numbers

No. of Securities	Mach. and equip. 10	Pulp and paper 9	Milling 2	Oils 5	Textiles and clothing 7	Food and allied prod. 13	Beverages 10	Bldg. mater. 14	Total Industrials 72	Banks 7	Total Utilities 13	Total co's 92
*1935 to date:												
High	947.5	1238.1	252.0	285.5	410.5	304.8	724.4	590.5	315.9	399.1	219.8	297.8
Low	68.5	51.6	59.7	40.9	77.7	72.4	79.3	68.7	56.1	68.4	64.5	60.6
1959 Monthly Figures:												
Jan.	690.9	1077.2	198.5	216.7	194.9	286.4	666.7	518.6	275.4	327.6	198.9	266.0
Feb.	674.4	1131.8	200.6	215.4	205.0	302.6	678.4	535.3	279.1	335.8	202.0	269.9
Mar.	682.7	1139.8	199.2	209.6	213.9	301.8	666.0	544.7	278.3	345.9	202.6	270.2
Apr.	666.2	1117.4	198.4	204.8	215.9	299.6	662.1	529.8	271.7	357.1	201.3	265.8
May	686.6	1109.8	211.0	200.0	215.4	292.0	670.6	526.6	271.5	370.4	204.3	267.2
June	776.4	1119.6	230.9	189.9	219.8	279.2	677.7	537.1	274.4	379.0	201.6	269.5
July	834.3	1183.7	239.9	192.9	227.5	273.7	702.7	580.1	286.2	387.5	203.0	279.3
Aug.	794.0	1169.2	232.0	193.0	230.1	264.2	702.4	564.6	282.0	373.7	199.8	274.6
Sept.	741.3	1086.0	221.2	176.7	211.4	251.7	656.7	523.6	261.6	347.6	188.9	255.4
Oct.	744.9	1090.8	207.3	168.4	205.7	245.1	652.5	514.3	257.4	354.7	187.3	252.5
Nov.	706.3	1123.5	209.8	168.4	206.4	232.4	668.3	529.1	259.2	342.5	186.9	252.8
1959-60 Weekly Figures:												
Dec. 3 ..	710.6	1152.5	209.6	167.8	202.3	231.2	668.1	528.0	262.0	343.7	189.2	255.5
Dec. 10 ..	730.4	1176.1	209.6	174.7	209.4	235.0	660.8	538.2	269.2	354.7	191.8	262.1
Dec. 17 ..	767.3	1177.0	209.1	178.1	217.6	233.4	661.1	541.5	272.8	351.3	190.9	264.4
Dec. 24 ..	759.1	1182.1	209.1	177.6	206.8	227.7	674.3	536.8	271.1	342.7	190.4	262.9
Dec. 31 ..	756.1	1184.9	205.1	175.8	212.6	228.9	673.2	535.8	271.0	343.8	190.9	262.5
Jan. 7† .	767.3	1184.6	206.2	176.1	211.4	227.4	664.2	531.5	271.1	341.5	192.6	262.7
Jan. 14† .	745.5	1175.3	203.5	185.4	200.5	226.4	660.5	523.2	271.1	336.3	190.9	262.1
Jan. 21 ..	734.4	1147.0	206.3	180.9	200.4	225.4	652.4	516.7	266.2	333.2	191.6	258.3
Jan. 28 ..	720.5	1120.3	200.6	178.4	199.4	218.7	647.1	500.5	262.0	320.1	189.0	253.7
Feb. 4 ..	724.4	1098.3	202.0	179.0	201.1	221.2	646.7	503.7	262.7	324.2	188.2	254.4
Feb. 11 ..	719.7	1088.6	194.6	175.3	198.6	215.7	638.7	497.7	260.9	320.8	188.0	252.7

†Revised.
*High and low for year from 1935 to date inclusive are based on weekly figures used by the Dominion Bureau of Statistics.

TORONTO STOCK EXCHANGE INDEX

	20 Indust.	20 Golds	15 B.M.	15 W.O.
Feb. 15	500.73	88.47	165.31	98.45
Feb. 12	504.38	88.74	166.62	99.39
Feb. 11	507.04	88.30	166.37	99.26
Feb. 10	509.79	88.49	166.85	99.55
Feb. 9	509.73	88.52	166.98	99.83
Month Ago .	524.96	89.72	172.56	105.03
Year Ago ..	531.52	91.68	184.86	142.67
1959-60 High .	555.65	95.13	192.15	145.22
1959-60 Low .	489.77	84.80	157.19	98.31

MONTREAL STOCK EXCHANGE INDEX

	10 Util.	20 Indust.	30 Com.	10 Pprs.	15 Golds
Feb. 15 ..	138.1	297.5	244.3	421.3	78.04
Feb. 12 ..	137.5	299.7	245.6	421.9	78.95
Feb. 11 ..	137.2	301.0	246.4	423.2	79.73
Feb. 10 ..	137.5	301.0	246.5	422.4	79.40
Feb. 9 ..	138.1	302.4	247.7	427.3	79.33
Mon. Ago	143.7	312.0	255.9	449.2	83.60
Year Ago	152.5	311.8	258.7	480.1	87.34
59-60 High	162.1	334.4	274.4	494.8	92.77
59-60 Low	137.2	285.9	238.0	403.4	78.04

DOW-JONES CLOSING STOCK AVERAGES

	30 Indust.	20 Rails	15 Util.	65 Stocks
Feb. 15	617.57	150.25	85.34	204.92
Feb. 12	622.23	151.20	85.47	206.17
Feb. 11	618.57	150.16	85.72	205.26
Feb. 10	623.36	150.77	86.06	206.54
Feb. 9	628.45	150.80	85.94	207.50
Month Ago .	653.86	156.66	86.65	214.58
Year Ago ...	587.91	161.35	90.88	204.28
1959-60 High .	682.62	173.56	94.70	224.35
1959-60 Low .	574.46	146.65	85.05	200.09

Canadian Auto Production

	Week ending Feb. 13	Same week 1959	Year to date 1960	Year to date 1959	% change to date
CARS					
General Motors:					
Buick	292	311	2,012	2,287	
Chevrolet	2,024	1,985	13,159	13,646	
Oldsmobile	445	442	2,723	2,923	
Pontiac	1,644	1,445	10,635	8,505	
	4,385	4,183	28,529	27,361	+4
*Ford:					
Ford	1,239	1,128	6,986	6,124	
Mercury	158	267	158	1,223	
Meteor	760	874	3,711	3,563	
Monarch	151	212	699	995	
	2,308	2,604	12,116	12,412	—2
Chrysler:					
Chrysler	....	210	624	858	
DeSoto	....	34	424	171	
Dodge	....	566	2,337	2,308	
Plymouth	....	394	2,988	1,705	
	....	1,204	6,373	5,072	+26
Studebaker-Packard:					
Studebaker	120	212	583	1,056	—45
Total cars	6,813	8,203	47,601	45,871	+4
TRUCKS					
General Motors	910	680	5,993	4,659	
Ford	384	360	2,072	1,750	
Chrysler	....	149	930	685	
International	277	234	1,650	732	
Total trucks	1,571	1,423	10,645	7,826	+36
Total cars, trucks	8,384	9,626	58,246	53,697	+8

*Includes Edsel production, 1959 model year.
Source: Canadian Automobile Chamber of Commerce.

Mutual Funds

	Divd. pd. cents ▲	Bid	Ask.
All-Can. Com. Fd.	(30.563)	7.18	7.81
All-Can. Div. Fd.	(32)	5.72	6.22
American Growth New	(18)	7.12	7.76
Assoc Investors	(33½)	7.86	7.94
Can Invest. Fund	8(38)	8.47	9.29
Canafund	(125)	34.49	36.21
Champion Mut. Fund	4(21)	5.32	5.85
C'wealth Inter.	10(29)	7.77	8.54
Corporate Inv.	(42½)	8.55	9.35
Diversified Inc. B	5.4(10.8)	3.90	4.25
Dom. Equity	(5.2)	14.75	15.04
Dom. Comp. Fund	(38)	9.05	9.41
Do. nonres.	(38)	9.00	9.36
Dominion Funds	(38)	8.72	9.07
First Oil & Gas		3.83	4.19
Group Accum.		5.21	5.69
Grouped Inc.	(23.7)	3.58	3.91
Growth Oil & Gas		6.63	6.97
Invest Growth	(10.5)	5.77	6.21
Investors Mutual	8.5(33)	10.55	11.41
Leverage Fund	(10)	6.31	6.93
Mut. Acc. F.	(23.87)	7.03	7.69
Mutual Bond		5.73	6.00
Mutual Income	6.18(26.16)	4.71	5.15
North American	(120)	8.24	8.96
Regent Fund Ltd.	(9)	5.20	5.72
Sav. & Int. Mut.	4.5(18)	4.98	5.44
Sup'vised Amer.	(12)	6.67	6.74
Sup'vised Executive (1955)		36.01	...
Sup'vised Executive (1956)		29.47	...
Sup'vised Executive (1957)		5.06	...
Sup'vised Executive (1958)		5.34	5.39
Sup'vised Gr'th Fund	(3.5)	1.64	1.66
Sup'vised Inc. Fund	(17)	3.75	3.79
T.V. Electr's		7.18	7.85
Timed Invest.	(25)	5.35	5.78
Trans-Can. A	(95.2)	27.05	...
Do. B	(91.1)	28.35	...
Do. C	8.2(18)	5.65	6.20
United Accum. Fund	(24)	13.91	15.11

▲Paid or payable in 1960, total paid in 1959 in parentheses.
■Of which 62½ (U.S.) cap. gains dist in 1959
‡Including initial
§Final payt. in 1959 not available.

Options on Stock

Supplied by Kippen & Co. Inc., Montreal
90-Day Call Offerings Per 100 Shares Feb. 15, 1960

	$		$
Alta Gas	225	Hollinger	225
Aluminium ...	275	Horne & Pitfld	80
Atlantic Coast.	40	Imp Oil	320
Atlas Steels ..	240	Irish Copper ..	35
Bailey Sel A ..	70	Lamaque	75
B A Oil	290	Leitch Gold ...	35
Can Iron Fdry.	195	Maritimes	27
Cdn Brit Alum	135	Massey-Ferg ..	120
Cdn Chieftain .	25	N Dickenson .	40
Cdn Collieries .	155	Opemiska	85
Cdn Delhi	85	Orchan	29
Cdn Hydrocarb	145	Pacific Pete ..	130
CPR	245	Premium Iron .	60
Campbell Chib.	70	Provo	45
Coch Willans .	50	Que Nat Gas .	180
Cockshutt Pl .	240	Sherritt Gord .	50
Columbia Cell .	65	Steep Rock ...	125
Copper Rand ..	28	Steinberg's	200
Craigmont	50	Teck-Hughes ..	38
Creative Tele .	200	Temagami	35
Dom Tar & Ch	170	Tr-Can Pipe ..	215
Dynamic Pete .	28	Un Asbestos ..	60
Elder	30	W Cdn O&G ..	32
Falconbridge ..	295	West Decalta .	29
Geco	185	Willroy	30
Gen Devel	225	Westcoast	165

Commodities

	Latest week	Previous week	Same week last yr.
Cattle	$22.50	$22.78	$26.50
Hogs	22.90	22.65	24.00
Copper, lb.	.33	.33	.30
Coffee, lb.	.37	.37	.46½
Sugar, raw, lb. .	.0550	.0553	.0550
Hides	.21	.23	.20

Weekly Commodity Indices

Dow Jones Fut.♦	146.00	146.12	144.72
U. S. Labor	119.2	119.2	119.4

Monthly Price Indices

	Latest month	Previous month	Same month last yr.
Retail C.P.I.* Canada (D.B.S.): (Dec.)	127.5	127.9	126.1
W'sale (Nov.) .	230.3	230.1	228.8
C. F'm Pr.* (Nov.)	217.1	215.4	212.1
U. S. W'sale (Sept.)	119.6	119.1	119.1
Gr. Br. W'sale♦ (Sept.)	111.4	■111.3	111.1

Base of price quotations is as follows: Cattle-Steers, good up to 1,000 lb., to price Toronto. Copper-electrotypes, New York. Coffee No. 4 Santos. Spot Raw Sugar 96 degrees centrifugal c.i.f.
*Base years 1947-49=100.
♦Base years 1924-26=100.
♦Base year 1954=100.
■Revised.
†Not available.

Unlisted Mines & Oils

(Compiled from Quotations by G. E. Leslie & Co., Montreal)
Feb. 15, 1960

Stock	Bid	Off.	Stock	Bid	Off.
Alsab	31	35	Lk Chib	..	15
Aconic	25	30	Main Oka	45	55
Do vt c	20	30	Martin Bird	4	6
Amal Mng	..	55	Matt Lk	5½	6½
Arnora	..	2	Matt Ex	22	27
Assoc Dev	8	10	Murray M	32	37
Atlas Chib	1	3	Monor	34	42
Bald Mtn	4	6	Miller Cop	7	10
Bros'n Ch	11	15	Natl Mal	10	13
Big Nell	15	25	Nipiron	12	16
Bracemac	12	15	North Mat	12	16
Cdn Javln	7½	8	Oklend	3	5
Caprive O	..	30	Pascalis	15	20
C Vauze	80	90	Quedon	..	5
Copperstm	..	35	Quejo	3	6
Dauphin	10	15	Rand Mal	5	7
Franksin	..	30	Sheraton	..	45
Gibson	9	14	St Jude	2	5
Glencona	½	1	St Helen	..	25
Hull Irn	1.40	1.50	Scott Chib	2	4
Imp Min	6	11	Starlight	2	4
Independt	7	10	Tarpoint	1	3
Kenmac	2	4	Valmont	8	12
Lk Sup Ir	15	25	Wm Leys	2	6
Lun Echo	28	31	Young Dav	15	20

Bruck Pays Divd. Sales are Lower

MONTREAL (Staff)—Directors of **Bruck Silk Mills** have declared a quarterly dividend of 30c share on class A stock, holding arrears at $6.30 per share.

The dividend, payable March 15, is the second consecutive payment on class A stock since it first went into arrears in the spring of 1956.

President Gerald Bruck told FP company's previously announced dividend policy (FP, Nov. 14) still stands.

Any further dividends, he said, will be considered by directors from quarter to quarter only in light of operating results. He added that when earnings justify dividend payments, they will be made.

At the annual meeting held in Montreal last week, Bruck informed shareholders that sales in the first quarter ended Jan. 31 were "moderately below" those in corresponding 1957-58.

He noted that while company's results in the year ended Oct. 31, 1959, were substantially better than in the previous year, "unresolved problems confronting the textile industry generally are still present."

He said industry hopefully is anticipating an upswing in demand in 1960 similar to the one last year.

Total demand for clothing in Canada remains "reasonably good". Bruck said the big question is whether such demand would be satisfied by domestic production or by imports, particularly from low-wage areas.

Unlisted Industrials

(Compiled by McDonnell, Adams & Co., Ltd., Toronto)
Feb. 15, 1960

	Bid	Asked
Alexander Building	16.00	....
Anglo Canadian Tel A ..	29.25	30.25
Brinton Pete Carpet	45.00	49.00
British America Assce. ...	103.00	107.00
British Mortge & Trust ..	250.00	....
British Newfoundland	3.50	4.00
Cdn Admiral Corp.	14.00	15.50
Can Canners B	10.75	....
Cdn Corp Management ..	7.85	8.50
Can. & Foreign Sec.'s ...	7.75	....
Cdn General Insce.	400.00	600.00
Capital Wire Cloth	20.00	22.00
Cawthra Apts.	56.00	....
Cent. Can. Invests.	15.00	....
Commercial Life 20% paid	32.50	....
Commercial Finance	55.00	....
Concourse Bldg.	170.00	190.00
Copp Clark 6% pfd	81.00	85.00
Crown Life Insce.	163.00	167.00
Crush Int. 6½% pfd	103.00	105.00
Debenture & Secs pfd. ..	80.00	....
Dollar Land Corp Units . ($100 7% deb. & 6 common)	162.00	166.00
Dom. Can. Gen. Insce.	....	55.00
Dom. Linseed Oil units ...	3.00	4.00
Dominion Life Assce.	165.00	200.00
Eastern Trust	27.25	28.25
Essex Packers pfd.	32.00	....
Do com	2.35	....
Excelsior Life	175.00	200.00
Fruehauf Trailer warr. ...	2.00	2.75
Goderich Elevator	18.50	19.50
Granite Club	14.00	14.75
Gt. Brit Can Inv. pfd. ..	85.00	....
Do com.	....	23.00
Great-West Life	292.00	302.00
Guar. Co. N. A. Fully Pd.	275.00	290.00
Do 20% Pd.	80.00	90.00
Halifax Insurance	22.00	23.00
Halton & Peel Trust	12.75	13.50
Hart Bty (1957) Ltd. units	3.00	4.00
Hees George $6 pfd.	....	25.00
Hudson's Bay Co.	27.25	27.75
Humberstone Shoe	6.50	....
Industrial Life	90.00	....
Industrial Mtge. & Trust .	106.00	112.00
Ingersoll Mach. 4% pfd. ..	80.00	....
Ingersoll Mach. & Tool B .	....	4.75
Jenkins Bros.	59.00	62.00
London Life Insce.	....	185.00
Lord Simcoe Hotel A	1.00	1.25
McCarthy Milling A	3.50	....
*Manufacturers Life	249.00	....
†Do.	242.00	....
§Do.	239.00	....
Maritime Life	122.00	....
Meadowvale development .	3.25	3.50
Mindustrial Corp.	1.45	1.60
Do warr.	.05	....
Monarch Life	50.00	55.00
Mutual Finance Corp. pfd	.75	....
National Life Assce. new ..	56.00	60.00
Pacific Western Airlines ..	2.25	2.50
Park Lawn Cemetery	2.25	2.75
Pembroke Electric Light .	87.00	....
Phillips Electrical	6.00	7.00
Prairie Royalty Trust	1.75	....
Prudential Trust	21.00	....
S.K.D. Mfg. 6% pfd.	9.65	10.00
Scott Misener S.S.	13.75	14.50
Sovereign Life 25% Pd. ..	215.00	222.00
Steelman Gas	2.25	2.75
Standard Fuel pfd	34.00	36.00
Teleflex Ltd.	17.50	18.50
Thompson Paper Pfd.	44.00	47.00
Tor. & London Inv's.	2.25	2.75
Tor. Medical Arts Bldg. .	54.00	60.00
Trans-Canada Freezers warr's.	1.00	....
Triarch Corp.	112.00	115.00
United Corps. 5% pfd. ..	23.50	24.50
Universal Cooler 6% pfd. .	53.00	....
Do B pfd.	2.00	....
Velok Units	38.00	40.00
Waterloo Mfg	8.50	....
Waterloo Trust	46.25	47.25
Westcoast Transmission ..	14.75	15.25
Western Assurance	82.00	86.00
Western Life 25% paid ...	105.00	....

*Original pledged stock.
†Later pledged.
§Unpledged.

By Kippen & Co. Inc., Montreal

	Bid	Asked
Consolidated Theatres A ..	6.00	8.00
Do B	5.00	....
Dupuis Freres pfd.	16.00	18.00
Guar. Co. of N.A.	275.00	300.00
Great Britain & Canada ..	20.00	23.00
Hart Battery units	3.50	....
Hudson's Bay Co. (new) .	27.25	28.00
Maritime Tel. & Tel.	16.50	17.00
Mtl. City & Dist. Svgs. Bk.	57.00	60.00
New Brunswick Tel.	11.50	12.00
Ont. & Que. R. 5% cap. stk.	95.00	100.00
Prudential Trust Co.	18.00	....
Westcoast Transmission ...	15.00	15.50

Corporation Bonds

Supplied by Investment Dealers' Association of Canada
Feb. 16, 1960

Public Utility Issues:	Int. Rate %	Due	Bid	Ask.	Prev. Week Bid
Alg. Cen. H.B.R.	5½	'79	92½	95½	92½
Bell Telephone .	5	'72	89½	91	89
Bowater Pr Co.	3½	'80	76	...	74
Braz. Tract. L&P	4½	'70	77½	80½	77½
B. C. Electric ..	5½	'88	83½	...	83
Do.	5½	'77	91	93	90½
B C Telephone	5	'82	85	87	85
Calgary Pwr. ..	3½	'72	78	80	78
Cons. Gas	5	'78	86½	89	86½
Gatineau Pr. D .	3½	'70	78	80	78
Gt Lakes Pr. ..	5½	'77	89	92	89
Maclaren-Quebec Power	3	'69	80	...	80
Mex. Lt. & Pr. .	5	'75	77	...	77½
Nat Lt. & Pwr. .	4½	'61	96½	...	96½
Nor Que Pr. ..	4½	'67	85	...	84½
Power Corp. ...	5½	'77	91½	93	91½
Que. Nat Gas ..	5½	'85	80	84	80
St Maur Pr. ...	3½	'70	78½	...	78
Shaw. W & Pr. .	4½	'76	84½	87½	84½
Tr. Can. P.L. .	5.85	'87	82	85	82
W'coast T Deb.	5½	'88	69	72½	69
Industrial Issues:					
Abitibi Pr P ...	6½	'77	98½	100½	98½
Do	4	'74	81½	...	81½
Acadia-Atlantic Sugar	4	'74	75½	...	75½
Alum. of Can. ..	4½	'73	85½	88½	85½
Bathurst P & P.	5½	'73	90½	93½	90½
Bicroft Uran. ..	5	'62	95½	98	95½
Can. Bread	4½	'67	86½	89½	86½
Can. Cement ...	5½	'76	89½	92½	89½
Can. Steamship .	4	'66	88	...	87½
Cdn. Brew	4½	'81	81½	84½	80½
Cdn Canners ..	3½	'70	80½	83½	80½
Cdn. Celanese .	3	'62	91	...	91
Cdn Chem. Co.	5½	'71	90½	93½	91½
Cdn Industries (1954) Ltd. ...	3½	'74	77½	...	76½
Cdn Dyno	6	'63	92	...	[illegible]
Cdn. Oil	4	'76	76	79	76½
CPR	3½	'66	85	87	84½
Do	3½	'72	76½	78	76
Cdn Met.	5½	'62	83	[illegible]	83
Cockshutt F Eq	4½	'65	85½	88½	87½
Cons Denison ..	5	'62	96	99	96
Dom Fdrs & S	4½	'69	86½	89½	86½
Dom. Stores ...	5½	'76	90½	93½	90½
Dryden Paper .	4½	'74	83½	86½	83½
T Eaton Acc. .	4½	'74	81½	84½	81½
T Eaton Realty	5½	'76	88½	91½	83½
E. B. Eddy ..	4	'74	74½	...	72½
Elk Falls	5	'75	79½	82½	79½
Gen. M Accept.	4½	'69	85½	88½	85½
Gt. Lakes Pap.	5	'76	84½	87½	84½
Gunnar Mines ..	5	'60	98	...	98
H Bay O&G ..	4	'75	74½	77	74½
Husky Oil	5	'69	79½	...	79½
Imp. Tobacco ..	3	'70	77½	81½	77½
Imp Oil	3	'69	78½	82½	78½
Indust. Accept.	6	'77	92½	...	92
Loblaw Groc. .	6	'77	94	97	93
Lorado Uran. .	6	'62	80	84	79
Maple L.M. ...	3½	'63	91	...	91
Massey-Ferg. ..	4½	'76	79½	83½	78½
North Cdn Oil	5	'75	67½	73½	67½
North Span ...	5½	'63	89	90½	88½
North Star	4½	'78	79½	82½	77½
Ont. Jockey Cl.	5½	†'72	82½	86½	80
Phillips Elect. .	5	'73	87½	...	87½
Price Bros. ...	3½	'66	85	...	85
Pronto Uran. ..	5	'60	98	100	98
Regent Refining	4½	'75	78	...	78
Rio Tinto	5	'63	95	96	94
St. Law Corp. .	5	'72	90½	93	90½
Sal.-Shirriff-H.	6	'77	95	98	95
Simpsons Ltd. .	4½	'73	86½	89½	86½
Steel of Can. ..	2½	'67	81½	84½	82½
Traders Fin. ...	4½	'71	81	85	81
Union Accept. .	5½	'68	87½	...	87½
Un. Grain Gr. .	3½	'70	80½	84½	80½
West Cdn. O&G*	5½	'73	92	...	93
Weston, Geo. ..	4½	'71	84½	87½	84½

†Ex. wts.
*Cum. wts.

CONVERTIBLE ISSUES

	Int. Rate %	Due	Bid	Ask.	Prev. Week Bid
Abitibi P. & P.	4½	'66	93½	96½	95
Atlas Steels	5	'67	103	109	99
Braz Trac L&P	4½	'71	73	76½	73
B. C. El. 6% Nov.	1	'84	104	106	104½
CPR	4	'69	83	85	82½
Cdn Petrofina	4	'72	73	76	73
Cockshutt F Eq	5	'68	85½	89½	89
Home Oil	5½	'71	90½	93½	92½
Shaw W & P. .	5½	'72	105½	108½	106½
Westcoast T. ..	5½	'88	77	81	77
Loblaw Groc. .	4½	'76	105	111	106
Phillips Elect.	5½	'70	88½	91½	88½
Silverwood Dair.	5½	'72	93	...	97
Trans Emp. Oil	5	'66	93	...	93
Do.	5½	'67	93½	...	93½
Triad Oils	4½	'71	75½	78½	75½

Foreign Exchange Rates

Noon Value In Canada
Week Ended Feb. 16, 1960

	U. S. $	U. K. £
Wed.	.95 4/16	2.67
Thurs.	.95 4/16	2.67
Fri.	.95 4/16	2.67
Mon.	.95 3/16	2.66 15/16
Tues.	.95 2/16	2.66 12/16
Ave.	.95 17/80	2.66 75/80

U.S. rate reported by Bank of Canada.
U.K. bid rate reported by Toronto-Dominion Bank.

Government Bonds

Feb. 16, 1960
(Supplied by Investment Dealers' Assoc. of Canada)

%	Due	Bid	Asked
Govt. of Canada Bonds:			
3	Perpetual ...	67	69
2¾	June 1967/68.	82	83½
3¾	Jan. 1975/78.	78½	79½
3¾	Mar. 1996/98.	75½	77½
3	Dec. 1960 ...	98½	99½
3	May 1961 ...	97½	98½
3¼	May 1970 ...	85	86½
3¼	Oct. 1979 ...	74½	75½
2¾	Apr. 1960 ...	99½	100
3	Dec. 1961 ...	96	96½
3¾	Sept. 1965 ...	90½	91½
4½	Sept. 1972 ...	87½	89
4½	Sept. 1983 ...	85½	87
4	Jan. 1963 ...	97½	98½
5½	Oct. 1960 ...	100½	100½
5½	Oct. 1962 ...	100	100½
3½	June 1974/76.	76½	77½
5½	Apr. 1963 ...	100	100½
Cdn. Nat. Railways:			
3	Jan. 1961/66.	86	88
2¾	Feb. 1961/63.	92	94
2¾	Jan. 1964/67.	84	86
3¾	Feb. 1972/74.	81	83
4½	Feb. 1981 ...	80½	81½
5½	Dec. 1964 ...	98½	99½
5½	Jan. 1985 ...	98½	99½

%	Due	Bid	Asked
Int. Bank of Reconstruct. & Development			
3½	Apr. 1965 ...	88	90
3½	June 1969 ...	81	83
C'wealth of Australia:			
4	Nov. 1970 ...	83	85
Prov. Govt. Bonds			
Alberta Tel. Gtd.:			
4½	July 1976/78.	78	81
British Columbia:			
3	June 1964 ...	87	89
Pac. Gt. East. Rly. Gtd.:			
4½	Dec. 1987 ...	80	83
Ontario Hydro:			
4½	Nov. 1964/67.	89	91
5	Apr. 1974/77.	89	91
6	Feb. 1978/80.	100	101
6	Feb. 1970 ...	100½	101½
Quebec:			
4½	Jan. 1974/77.	87	89

%	Due	Bid	Asked
New Brunswick:			
4½	Oct. 1968/71.	84	87
5	Oct. 1974/77.	87	90
Ontario:			
4½	Dec. 1962/63.	94½	96½
3	Nov. 1963/65.	86	88
5	Jan. 1977/79.	89	91
6	Nov. 1969 ...	101	102½
6	Nov. 1977/79.	100	101½
Man. Hydro:			
5	July 1975/77.	87	90
Manitoba:			
3	Oct. 1965 ...	84	86
Nova Scotia:			
4½	Dec. 1975/77.	84	87
5	June 1975/77.	88	90
Quebec Hydro Commission:			
5	Nov. 1980/82.	87½	90½
Saskatchewan:			
4½	Nov. 1974/76.	81½	84½
3½	Oct. 1962/65.	87½	89½
Newfoundland:			
4½	July 1962/64.	92½	94½
5½	Feb. 1977/79.	84	87

Unlisted Mines and Oils

By Brokers Dealers' Assoc. of Ont.

Approximate quotations, 3.30 p.m., Feb. 15, subject to confirmation and change. An asterisk (*) indicates an increase in price, a dagger (†) a decrease in price.

	Bid	Ask		Bid	Ask
Abbican	7	8	Camdeck	2	4
Abeta	3	4	Camlaren	2	3
Abino	*51	53	Camray	1	2
Aconic C	25	32	C Rd C	6	8
Do vt	20	25	C Al Mt	2	4
Advance	3½	4½	Cn Fer	140	145
Alexand	†8	9	Caral	3	5
Am Kirk	1½	2½	Cstlbar	18	21
Anabar	1	3	Cent Mn	5	6
Anamaq	1½	2½	Cent Hill	5½	6½
Anuwon	2	3	Shellew	4½	6
Arctic	1	2	Clinger	3	5
Barima	12	13	Clix	1½	2½
Beacon	2	4	Columbr	2	3
Belfast	4	5	Con Cop	11	13
B Jk P	2½	3½	Cn Fred	15	20
B Grass	1	2	Con Hrp	6½	8½
Bour C	2½	4	Cordell	1	3
Bracem	*13	15	Cn Vauz	†80	85
Braminco	8	12	Crackst	3	5
Bright	2	3	Craibee	37	39
Brilund	2	3	Croyden	2	3
B McDad	7	8	Derlac	3	4
Bruce P	8	10	Despina	1½	2½
Brunnet	2½	3½	Destrad	1	2

	Bid	Ask		Bid	Ask
Dom Ex	27	30	Nicoba	3½	5
Dumont	—	75	Nickel L	1½	3
Dunvegan	3½	4½	Nipiron	11½	12½
Durham	3½	4½	N Offsets	4	6
East Lun	1½	2½	Normar	1½	3
Echo Ind	½	1½	Oceanic	40	50
Ego	8½	9½	Oklend	*4	5
El Bon	1½	2½	Orofino	9½	10½
Farcroft	1	2½	Pacemker	4	5
Forty F	50	60	Panther	35	45
Gan Cop	3	4	Parmlee	10	—
Gatewy	3	5	Pascalis	†16	16½
Glenburk	5	6	Pax Nw	9	15
Glencona	½	1	Pelangio	1½	2½
Glen Ech	5	7	Penelope	90	110
G Harker	8	9	Pickering	5	6
Gord Lab	1	2	Picton	2	3
Goldmaq	4½	5½	Pn Pnt	†875	925
Goldyke	1½	2½	Pitchvein	8½	9½
Gov Gold	2	3	Prudent	14	18
Hallmon	7	8	Quejo	3	5
Hot Min	3½	5	Quest	½	1½
Hornflt	*7½	9	Raglan	10	12
Hubert L	5	7	Rand Ml	5	6
Hucamp	17	19	Redcon	7	9
Hud Ung	3	5	Redruth	1½	3
Independ	8	9	Redbark	1	2
Ind Mt	16	18	Rhyholite	1	2
Jamaican	5	7	Richgrup	4½	6
Jean L	5½	6½	R Tinto	105	115
Jerome	2	3	Rob RL	†14	16
KB Min	6½	8	Romar	—	2
Kamlac	11½	13	Rugged	1½	2½
Kenog	6	7	Russet	3½	5
Kenda P	†½	1	Salmita C	7	8
Lrndona	2½	4	Sheldon	*8½	9
Laronge	1	3	Shield	30	40
Larum	9	10	Sladen Q	68	73
Lassie	10	12	Slate Bay	3	5
Lk Expan	7	8	Snow L	2	4
Lk Renzy	5	7	Sn Drft	25	35
Lunecho	28	30	S Mary x	5	10
Magoma	5	6	Starlight	3	4
Main Ok	45	55	Sunbear	1½	2
Mall RL	4	5	Thornert	2½	3½
Manecho	4	5	Tower	1	3
Maree	†½	1	Tresdor	8	9
Mr Bird	4½	5½	Ur Ridge	6	8
Mat Can	7	10	Ungava C	2	4
Matt L	†5½	600	Un Prn	220	230
Mat Yel	5	7	Viqing	11½	13
McCuaig	3½	4½	Wadge	8	12
McFinley	4	5	Watson	12	15
Miles RL	2	3	Wesley	5	6
Millkirk	3	8	Westfld	15	25
Mindus	145	155	West RL	3½	4½
Montco	1	3	W Wasa	4½	5½
Mirado	6	7	Y David	14	16
M Keno	1	2			
Murky F	25	35	**OILS**		
Murmac	1½	2½	BC Oil	*1550	1700
Mury M	33	35	Do rts	*950	1100
Nasco	2½	4	C Delhi	*5½	5½
Nat Nw	10½	11½	GS Grs	25	28
New Aug	3	5	Harvest	†57	60
N Insco	7	8	N Surp	100	110
New Met	8	9	O Smoky	1	2
N Redwd	3	4	Paige P	3	—
N Walcor	2	3	P Dover	15	20

New Highs and Lows

In the week ended Feb. 13, 11 new highs and 75 new lows were registered by general stocks listed on Canadian stock exchanges. In the mining group, there were seven new highs and 22 new lows. Western oils had no new highs, seven new lows.

GENERAL

NEW HIGHS—1959-60

Belgium Stores pf.
Circle Bar Knit.
Do. 'A'
Creative Tele.
Credit Foncier
Gurney Prod. pf.
Loblaw Inc. new
Robinson Cotton
Sup. Pete ord.
Trans-Can. C.F.
United Cdn. shs.

NEW LOWS—1959-60

Albt. Dist.
Do. v.t.
Argus
Asbestos
Bank Nova Scotia
Bathurst 'A'
B.A. Oil
B.C. Power
Brockville pf.
Burlington Stl.
Calgary Pwr.
Can. Floor 'B'
Cdn. Dredge
Cdn. Oil
Cdn. West. Gas 4% pf.
B. J. Coghlin
Conf. Life Offered
Consumers Glass
Corbys Vot.
Creative Tele.
Crown Zeller.
Distill. Seagram
Dom. Bridge
Dom. Coal pref.
Dom. Glass
Dom. Stores
Eddy Match
Emco Ltd.
For. Pr. Secs.
Gt. Lakes Pwr.
Gt. North Gas 'B' warr.
Hardee Farms pf.
Indust. Accept.
Do. warr.
Interior Brew. 'B'
Int. Paper
Interp. Bld. Cr.
Kelly Doug. 'A'
Mackin. Steel
Macmil. Blo. & Powell River
Mass.-Ferg. 4½% pf.
Minn. & Ont. Pap.
Molson Brew. 'A'
Monarch Life
Morgan H. 4¾% pf.
Noranda
Ontario Stel pf.
Page-Hersey
Prem. Iron Ore
R & M Bearing 'A'
Reitman's
Renold Ch. 'A'
St. Lawr. Corp. 5% pf. 'A'
Shop & Save '57
Silverwoods 'A'
Simpson
Sobeys Stores 'A'
St. Pav.
Steinberg's 'A'
Switson Ltd.
Toronto Iron 'A'
Traders Fin. 'A'
Do. 4½% pf.
Do. 5% pf.
Union Accept. 1st pf.
United Steel
Universal Cont.
West. Copper
West. Grocers 'A'
Weston, G. 'A'
Do. 'B'
Do. warr.
Woodward 'A' warr.
Zellers
Do. 4½% pref.

MINING

NEW HIGHS—1959-60

Canorama
Chromium
Giant Yellowknife
Massval
New Dickenson
South-Duf.
Vanguard

NEW LOWS—1959-60

Anglo-Huronian
Can-Met.
Do. warr.
Coleman 'B'
Cons. New Pac.
Cons. Sudbury
Copper Rand
Cowichan
Gunnar warr.
Head of Lakes
Hoyle
Langis Silver
Lynx Yell.
Malartic
McIntyre
Nickel M & S
Noranda
Patino 'B' warr.
Que. Ascot
Rockwin
Slocan Duv.
Sylvanite

OILS

NEW LOWS—1959-60

Cdn. Superior
Gen. Pet. Dr. 'A'
Gt. Plains
Gridoil
North Cdn. warr.
Pacific Pete
United Oils

WOOD OFFICER

Charles H. Davies will be western field officer for the technical services department of Canadian Wood Development Council as of March 1. Headquarters will be at 550 Burrard St., Vancouver. He will be responsible for building code and technical promotion work in the Prairie Provinces and British Columbia. Davies was formerly regional plans examiner for Central Mortgage & Housing Corp.

ANNOUNCEMENT

UNITED STEEL APPOINTMENT

H. LIGHTBOWN

Mr. A. G. House, President of United Steel Corporation Limited, has announced the appointment of Mr. H. Lightbown as Chief Engineer of The Dodge Manufacturing Division of the Corporation.

Mr. Lightbown, a graduate of the University of Toronto, 1934, has held senior engineering positions with several industrial organizations and brings a wide background of experience to his new duties.

B.C. Pipeline Fight Revives

From Our Own Correspondent

VANCOUVER — Competition to build the underwater natural gas pipeline between the British Columbia mainland and Vancouver Island has revived (FP, Jan. 16).

Island Transmission Co., the loser in the recent hearing before B.C.'s Public Utilities Commission, has appealed award of the pipeline franchise to the PUC.

Island Transmission contends that some figures Magna used during the hearing to support its case were inaccurate, and that if Magna figures were revised to more realistic levels the Magna project would consistently lose money.

The two companies proposed strikingly different pipelines.

Magna would use a flexible underwater pipeline, while Island Transmission planned a conventional big-inch steel pipeline.

No date has been set for the appeal.

THE DOMINION OF CANADA GROUP

THE DOMINION OF CANADA GENERAL INSURANCE COMPANY

THE CASUALTY COMPANY OF CANADA

— AN ALL-CANADIAN GROUP —

AUTOMOBILE • FIRE • CASUALTY

HEAD OFFICE: TORONTO

BRANCHES: METROPOLITAN TORONTO • HAMILTON • KITCHENER • LONDON
OTTAWA • WINDSOR • MONTREAL • CALGARY • VANCOUVER • WINNIPEG
PORT OF SPAIN, TRINIDAD • KINGSTON, JAMAICA

58-4

THE CANADIAN NATURAL GAS INDUSTRY

—4 GAS STOCKS TO BUY NOW!

The prime Canadian growth stock in the natural gas field is featured in our new Special Report on the Canadian Natural Gas industry. The Report shows the strategic position occupied by this company in the development stage of this great industry. Sales projections through 1963 suggest substantial profits.

Three most promising U. S. companies, vitally concerned with Canadian gas exports, are also highlighted in this Report.

Send for a copy of this illuminating 12-page Report. You may have it at the reduced price of $2 as a basis for determining the merits of our industry stock service.

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Gentlemen:
I enclose $2. Please mail me your Special Report on the Canadian Natural Gas Industry.

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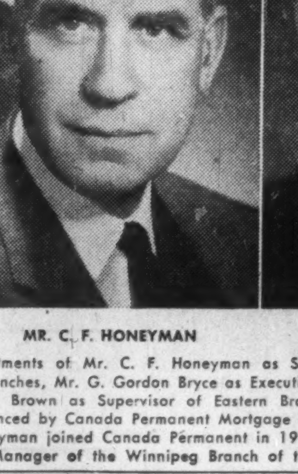
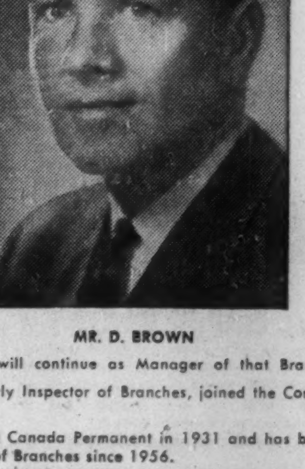
ANNOUNCEMENT

CANADA PERMANENT MORTGAGE CORPORATION



MR. C. F. HONEYMAN

MR. G. GORDON BRYCE



MR. D. BROWN

The appointments of Mr. C. F. Honeyman as Supervisor of Western Branches, Mr. G. Gordon Bryce as Executive Assistant and Mr. D. Brown as Supervisor of Eastern Branches have been announced by Canada Permanent Mortgage Corporation.

Mr. Honeyman joined Canada Permanent in 1922 and was appointed Manager of the Winnipeg Branch of the Corporation in 1946. He will continue as Manager of that Branch.

Mr. Bryce, formerly Inspector of Branches, joined the Corporation in 1936.

Mr. Brown joined Canada Permanent in 1931 and has been Assistant Inspector of Branches since 1956.

DIVIDEND NOTICES

BANQUE CANADIENNE NATIONALE

QUARTERLY DIVIDEND

Notice is hereby given that a dividend of four per cent (4%) has been declared by the Directors of Banque Canadienne Nationale on the paid-up capital stock of the Bank for the quarter ending on the 29th day of February, 1960. This dividend, bearing number 276, will be payable at the Main Office or at the branches of the Bank, on or after the first day of March 1960, to shareholders of record on January 29, at the close of business.

Shareholders having subscribed to new shares will rank, for the purpose of these dividends, in proportion to the amount they will have paid as of January 29.

By order of the Board.

ULRIC ROBERGE, General Manager.

NORANDA MINES, LIMITED

DIVIDEND NOTICE

NOTICE is hereby given that an interim dividend of Fifty Cents (50c) per share, Canadian funds, has been declared by the Directors of NORANDA MINES, LIMITED, payable March 15th to Shareholders of record February 17th, 1960.

By Order of the Board.

C. H. WINDELER, Secretary.

Toronto, Ontario, February 10th, 1960.

AUTO ELECTRIC SERVICE COMPANY, LIMITED

Notice is hereby given that a dividend #49 of 35c per share upon the no par value Common Shares has been declared payable on and after the 15th day of March, 1960, to the Shareholders of record at the close of business on the 19th day of February, 1960.

By Order of the Board.

A. C. FIELD, Secretary.

Dated at Toronto, Ontario, February 9, 1960.

AUNOR GOLD MINES LIMITED

DIVIDEND NOTICE

NOTICE is hereby given that an interim dividend of Four Cents (4c) per share, has been declared by the Directors of AUNOR GOLD MINES LIMITED, payable March 1, 1960, to Shareholders of record February 16, 1960.

By Order of the Board.

C. H. WINDELER, Secretary.

Toronto, Ontario, February 9, 1960.

HALLNOR MINES, LIMITED

(No Personal Liability)

DIVIDEND NOTICE

NOTICE is hereby given that an interim dividend of Four Cents (4c) per share has been declared by the Directors of HALLNOR MINES, LIMITED (No Personal Liability) payable March 1, 1960, to Shareholders of record at the close of business February 16, 1960.

By Order of the Board.

C. H. WINDELER, Secretary.

Toronto, Ontario, February 9, 1960.

KERR-ADDISON GOLD MINES LIMITED

(No Personal Liability)

INTERIM DIVIDEND No. 97

NOTICE IS HEREBY GIVEN that an interim dividend of twenty cents per share has been declared on the issued capital stock of the company, payable in Canadian funds on Thursday, March 24th, 1960, to shareholders of record at the close of business on Monday, February 29th, 1960.

By Order of the Board,

G. A. CAVIN, Secretary.

Toronto, Ontario. February 12th, 1960.

BOWATERS MERSEY PAPER COMPANY LIMITED

DIVIDEND NOTICE No. 14

NOTICE IS HEREBY GIVEN that a quarterly dividend of sixty-eight and three quarters cents (68¾c) per share has been declared on the outstanding 5½% Cumulative Redeemable Preferred stock of the Company payable April 1st, 1960 to shareholders of record February 26th, 1960.

J. A. PARKER Secretary

Liverpool, Nova Scotia, February 2nd, 1960.

ST. LAWRENCE CORPORATION LIMITED

DIVIDEND NOTICE

Notice is hereby given that the following regular quarterly dividends have been declared, payable in lawful money of Canada, April 25, 1960, to the shareholders of record at the close of business on March 25, 1960.

PREFERRED SHARES

A dividend of One Dollar and Twenty-five cents ($1.25) per share on the outstanding 5% Cumulative Redeemable Preferred Shares, Series "A" of the Capital stock of St. Lawrence Corporation Limited.

COMMON SHARES

A dividend of Twenty-five cents (25¢) per share on the outstanding Common shares of the Capital stock of St. Lawrence Corporation Limited.

By order of the Board of Directors.

J. E. MARTIN, *Secretary.*

MONTREAL, QUE. February 10, 1960.

DIVIDEND NOTICES

CATELLI FOOD PRODUCTS, LTD.

NOTICE OF DIVIDENDS

NOTICE IS HEREBY GIVEN:

That the following dividends will be paid on February 29th, 1960, to shareholders of record on February 15th, 1960.

a) Thirteen cents (.13c), regular quarterly dividend, plus twenty-five cents (.25c) additional dividend, on each Class "A" share.

b) Twenty-five cents (.25c), regular quarterly dividend, plus twenty-five cents (.25c), additional dividend on each Class "B" share.

J. P. TALBOT, Secretary-Treasurer.

HIRAM WALKER-GOODERHAM & WORTS, Limited

DIVIDEND NOTICE

A quarterly dividend of 35 cents a share has been declared on the outstanding no par value Common stock of this Company, payable Saturday, April 16, 1960, to shareholders of record at the close of business on Friday, March 18, 1960.

By Order of the Board,

A. H. STUART, Secretary

Walkerville, Canada, February 4, 1960.

BAILEY SELBURN OIL & GAS LTD.

Baysel

FIRST SERIES PREFERRED DIVIDEND NOTICE

Notice is hereby given that a Dividend of thirty-one and one-quarter cents (31¼c) per share has been declared on the 5% Cumulative Redeemable Convertible Preferred Shares, First Series, of the Company, payable on March 1st, 1960, to Shareholders of record at the close of business February 15th, 1960.

By Order of the Board,

C. M. MacINNES, Secretary.

Calgary, Alberta.

BAILEY SELBURN OIL & GAS LTD.

Baysel

SECOND SERIES PREFERRED DIVIDEND NOTICE

Notice is hereby given that a Dividend of thirty-six cents (36c) per share has been declared on the 5¾% Cumulative Redeemable Convertible Preferred Shares, Second Series, of the Company payable on March 1st, 1960, to Shareholders of record at the close of business February 15th, 1960.

By Order of the Board,

C. M. MacINNES, Secretary.

Calgary, Alberta.

Canada Wire and Cable Company Limited

The Board of Directors of this Company have today declared the following Dividends

CLASS "A" COMMON

Declared and set aside $4.00 per share on the outstanding Class "A" Common Stock of the Company of which the sum of $1.00 per share is to be paid on the 15th of March, 1960, to Shareholders of record 29th February, 1960

CLASS "B" COMMON

An interim Dividend of 5¢ per share on the outstanding Class "B" Common Stock of the Company, payable on the 15th of March, 1960, to shareholders of record 29th February, 1960.

By Order of the Board.

A. L. Irwin, Secretary.

Toronto, February 15, 1960.

DISTILLERS CORPORATION—SEAGRAMS LIMITED

DIVIDEND NOTICE

Notice is hereby given that a dividend of thirty cents (30¢) per share in Canadian currency on the outstanding Common Shares of the Company has been declared payable March 15, 1960, to shareholders of record at close of business February 25, 1960.

By Order of the Board.

H. C. COX, Secretary.

Montreal, February 8, 1960.

Market Bid and Ask Quotations

Montreal & Toronto Feb. 16, 1960

Stock	Bid	Ask
xAbacus	31	32
Abitibi	35¾	36¼
Do p	22¼	22½
Ac-Atl	10½	10½
Do A	18½	18½
Do p	..	89
xAc Ur	8	9½
xAcme	18	19
Adml	17¾	17¾
xAdvoc	266	275
Ag-S	20	20⅜
xAgnico	67	70
xAjax	64	73
xAkaitc	40	41
xAlba	6	6½
xAlta D	240	250
xDo vt	..	190
xDo w	90	92
Alt Gas	24½	25
xAP Con	52	55
Algom	11¾	11¾
Alg C	17¾	18¼
Do p	55	56¾
Do w	300	525
Algma	33	33½
Algon	7¾	8
Do p	18	19
xAll R	25	36
xAlmin	253	255
Alumi	30½	30¾
Do 1 p	20	20½
Do 2 p	41½	41½
xA-Lar	70	24
xA Rare	7½	8
xAm L	11	11½
xA Nep	60	63
xAmur	..	210
xAnac	71	72
Analog	6	6¾
xDo w	300	325
xAnch	12	13
Ang Am	..	690
An-Cdn Tel	46½	47¾
A Pip p	49	51
Ang Hu	11½	11¾
xAng R	22	23½
xAnsl	25	26
Anthes	33½	33½
Do B p	90	92
xArc w	5	6
xArea	84	95
Argus	28¾	28¾
Do 240p	58	68
Do 250p	43½	44
xArjon	8	8½
xAsama	70	80
Ash A	11	11
Do B	13½	13¾
xAsh T	7¾	8
Do A	92	..
Do B	9	10
xA Arc	50	51
Atl A	12½	13
Do 1 p	16	18
xAtl C C	184	195
Atlas	23½	23¾
xAt Yk	7½	8
xAt-Ruf	10	10½
xAumac	9½	11
xAumaq	11	12
xAunor	272	280
Aut El	25½	26
Aut F A	7½	9½
xDo B	325	380
xBly SA	660	685
Do p	17½	18
Do 5¾	17¾	19
xBanff	105	118
xBnkno	19	20
xBnkfld	8	8½
Bk Mtl	50½	51
Bk NS	62	62½
Ba Cndien	51½	53½
Barb-E	70	..
xBrclna	400	..
xBarnat	150	151
xBary E	51	55
xBase M	13½	15
xBaska	10	11
xBata	4	5
Ba In	5	8
Bath A	39½	40
Do B	26	27
xB-Duq	18½	20
Beatty	6½	6¾
xBeav L	13	13½
B Lum	21	24
Do A	16½	16½
Do p	27	28
xBelch	65	66
Bell	43½	43¾
xBellet	31½	36
xBthlm	80	84
xBevcn	16	17½
xBibis	10	11
xBicrft	64	65
xBidcop	9	10½
Bilt	6½	7
Do p	13	13½
xBl Bay	16	17
xBordul	6	6½
xBouzn	54	55
Bow p	42½	42¾
Do 5½ p	47	47
Bow Mer p	46	47
Bowat	9¾	9¾
Bowes	27	30
xBoymr	7	7½
xBrlrn	535	540
xBralsa	45	55
Brazil	420	425
Do p	75	89¾
Br T	21½	22
Do p	46	46½
Bright	41	45½
Do p	20	23½
xBritalt	226	230
BA Oil	30½	30½
BCE 4 p	70½	71
Do 4¼ p	37	38
Do 4¼ p	38	38½
Do 4¾ p	82	82¼
Do 5 p	44	45½
Do 5¼p	48¾	49
BC For	12¼	12¾
BC P A	14½	15½
Do B	14½	14½
BC Pow	32¾	32¾
BC Phone	42½	43
Brck C pr	10¾	10¾
Brooke p	17	19½
xBr Reef	47	48½
Brown	9¾	10
Bruck A	..	10½
xDo B	275	275
xBrnsk	470	475
xBufad	9	9½
xBuf A	210	211
xBuf RL	6	7
Bld Prd	29¾	30½
Bull A	5¾	6
Do B	5	5
xBunk H	8	9
Burlton	16	16½
Burns	12¾	13
Burr A	6	6½
xCable	14	15
xCdmet	13	15
xCalalta	51	52
Cal Ed	19½	19½
Cal Pow	17¾	17½
Do 5 p	94½	94½
xCalv C	350	370
xCalvert	53	60
xC Chib	525	535
C R L	12½	12¾
Canada		
xC Brd	375	375
Do B	54¾	59
C Cem	30½	..
Do p	25½	25¾
CCC St	15	16½
C Foil	19	19
Do A	21½	25
C Fnd A	..	23
C Fnd	8	15
Cl Fnd	21½	22
Do 4¼	75	77
C Mach	10	15
C Malt	..	51½
Do p	23½	24½
xC O Lds	120	124
xDo w	21	25
C P A	46¾	49½
Do B	46	47
C Perm	51½	52
C Saf 4 p	80½	81
xCSO w	45	52
xCS Pet	430	435
CSL	..	41¾
Do p	11¾	12
C Wre B	8	8½
Canadian		
xC Ast	7	7½
C Avia	14½	14¾
C Baks	6	7
C Bnk C	50	50½
C Br	35½	35¾
Do p	35¾	36
CB Al	13	13
xDo w	580	590
xDo Bw	505	520
C Can A	13	13½
C Cel	19¾	20
Do $1	16½	18½
Do $175	27½	28½
C Chem	6¾	6¾
xC Chief	110	113
C Coll	9½	9¾
xDo p	75	82
C Cvertrs	400	405
Do B	450	..
xC Curt	225	235
xC Dev	310	315
C Drn S	17	18
Do p	12	12¾
C Drdg	14½	15½
xC Dyno	38	42
xC E Gas	226	230
C Fbks A	10	10
Do B	7½	8½
xCF Pr	350	385
Do A	8	11
Do p	50½	54½
CGE	780	1180
CG S A	14¾	15½
Do B	16	18
xC High	33	37
xC Home	85	95
C Hsky	750	760
xDo w	310	320
C Hyd C	11½	11¾
C I Ma	6	..
Do A	11½	11¾
CIL	14	14½
Do p	72	76
C Intl Pwr	13½	13¾
C Loco	7	8
xC Mal	55	57
xC N In	15½	16½
xC NW	31	33
C Oil	22½	22¾
Do p	138¾	140
Do 4	..	77
Do 5	..	102
CPR	24½	24¾
C Pet p	10¾	11
C Salt	37	38
C Sup	11	11½
xC Thor	5½	6
C Tire	166	178
C Ut p	..	88
Do 4¼	70	..
C Vick	16	16¾
C Wal A	30	..
Do B	30	31¾
CWN p	13¾	14½
Do 5¼	18½	19½
C West	40½	42
xC Will	85	..
xCandor	14	15
xCanEr	93	94
xC Met	9½	10
xDo w	¼	¾
xCapt	7½	9
xCarib	108	112
Cass	12¾	13
xCayzr	46	49
xC Del	510	520
xC Pat	118	120
xC Porc	14	15
xChar O	116	119
Chart Tr	62¾	63½
C-Gai	23	23
xChesk	4½	5
xChest	36	37
xChib J	45	47
xChib-K	13	14
xChi M	62	65
xChim	51	52
xChrm	430	435
Chrys	..	56½
xC Bar	5½	6½
xDo A	5½	6
xCoch W	315	320
Co-D	..	20
Do A	15	15
Cshutt	16¾	17½
xCody-R	10	11
Coghlin	..	5
xCoin L	13½	15
Coll	13½	..
Do p	13½	18
xCol Cel	435	445
Com E	10½	10¾
xCo Met	31	33
xCmoil	125	..
xCom P	235	295
Conduit	12	13
Conf L	140	155
Do O	156	..
xConia	52	53
xCniaur	45	50
xCKey	21	23
xC All	5	6½
C Bak	8½	9
xC Bell	6	7
xC B G	9½	10
xC Call	9	11
xC C C	5	6
C Den	10½	10¾
xDo w	5½	6
xC Disc	360	365
xC Dra	25½	27
xC E Cr	43	45
xC Fen	28	30
C Fire	5	7
xC Gill	7	7½
xCG Ar	28	30
xC Hall	59	60
xC Hwy	260	280
xC Mrbn	30	33
xC Mrcs	58	59
xC M M	260	270
C M S	18	18½
xC Mogul	112	113
xC Morr	21	23
xC Mos	106	109
xC Neg	15	16
xC Nich	5	6
xC Nor	36	39
xC Pk	4	5
xC Pers	11	12
xC Que	30½	32
xC Red P	7	8
xC Reg	8½	9
xC San	5½	6
xC Sud	38	40
C Text	240	300
xC W P	340	345
C Gas	35¾	36
Do A	..	100
Do B	..	101
Cons Glass	20	25
Con C	40	40½
xCnwst	380	390
Cop Cl	7	7½
xC Cor	25½	26
xCop-M	9	9½
xCprnd	154	156
Corb vt	17½	17½
Do B	..	17
Camos	12½	12¾
xCoulee	27	29
xCourn	9	10
xCowic	52	55
xCraig	190	210
xCrgmt	355	370
Crain RL	20	20½
xC Telef	10½	10½
xCree w	232	234
xCrst	10	12
xCrsbk	..	145
Do p	14	15
Do w	5	28
xCroi	7½	9
Cr Cork	..	52
Cr Tr	25	26¾
Cr Zell	43½	44¾
Cr Zell (Cda)	18	18½
xCrowp	8½	9
Crow	15½	18
Crush	8½	8¾
xCurco	6	7
xDaer	14½	15
Dlex p	..	86
xD'Ara	28	29
xDe C	11½	13
xDeer H	20	21
xD'Eld	11	13
xDelte	49	57
xDev P	81	84
D Seag	29½	29¾
Dome	18¾	19
xD Pete	720	725
Dominion		
D Ang	535	..
Do p	93	..
D Brge	18	19
xD Coal p	350	400
Dom Corst	17	18½
D Dair	10½	10¾
Do p	24½	26
D Elec	8	8¾
xDo w	440	500
D Fab	..	12
Do 2 p	20	22½
D Fdry	44½	44¾
Do p	98	98½
D Ins	..	310
D Mag	6¾	7½
D Scot	..	32
Do p	41¾	44
Dosco	15½	15¾
D Strs	45½	46
D Tar	14	14½
Do p	18¾	19
D Tex	9½	9¾
Do p	112	131
xDonal	9½	9
Donohue	14	15½
Dover	..	12½
Do p	9	9
Dow	45	54
Dup Fre A	7	..
xDuvan	13½	15
xDuvex	6½	7
xDynam	133	134
xE Am	7	7½
East Koot	5	8½
xE Mal	155	157
xE Sull	150	159
Easy p	17	18
Econ I	36½	38
Eddy	..	59¾
Do A	..	61
Ed Ma	26½	27½
xElder	131	133
xEldr	20	22¾
xElectr C	98	..
Electrolux	17½	18½
xEx Sol	7	7½
Emco	11½	11½
Em Life	59	62
En & Heat	8½	10
Eq Life	54	60
Erie A	..	8½
xDo B	100	100
xEurka	18	21
xEx All	6	7
Falcon	29½	29¾
Fam Pla	19½	19½
Fan F	16	16½
xFrdy	75	78
xFargo	400	405
xFwest	8	9½
xFatima	55	57
Fed Fire	36	..
Fed Gr	42½	44
Do p	27½	27½
Fibre	7	7½
Do p	6½	..
Fitting	7½	8¾
Do A	9½	10
xFleet	60	63
Ford US	72¾	74
Ford C	..	155¾
Found	10½	10½
xFrnc	5½	6½
Fraser	25¾	26½
Frei p	89½	99
xDo p	500	525
xFrbshr	170	175
Do db	84½	86
Frosst	14¾	15
Frue	5½	6
xGaitwn	5	5½
Gatin	32½	32½
Do 5 p	96½	96½
Do 5¼	101¼	..
Geco	16	17
G Bak	7½	7¾
G Dev	15½	15¾
G Dyn	42¾	43¾
G Elec	82¾	83½
GMC	42½	43
xGP Dr	81	105
xDo A	76	90
GP M A	30	31¾
Do B	34	..
GSW	12¾	13½
Do p	86½	87
xGenex	12	14
xGeo Sc	76	85
xGt Mas	23	24
xGiant	11¾	12
xGlacier	30	31
xGlenn	7	7½
xGldale	16½	18
xGF Mng	24	25
xGldry	25	26
Gdy	142	164
Do p	41	41½
G Mac A	6¾	6¾
Do B	7	7
Gftn A	16½	18
xGranby	600	..
Gr Toy	45	..
xGrdroy	14	15
xGduc	115	125
GL P	38¾	39½
GL Pow	23	24
Do p	19½	21
Do w	500	700
GN G	5¾	6
Do p	..	36
Do 280	40	40
xDo w	170	180
xDo Bw	165	190
Gr Pins	10½	11
GW C A	480	490
Do B	360	360
G Wpg G	10½	10½
Do vt	10	10½
Do 56w	465	480
Do 58w	535	600
Gr W	5½	5½
xGrning	400	425
xGryhk	3	3½
Greyhnd	10½	11½
xGridoil	155	220
Guar T	26½	27
xGulch	6	6½
xGulf L	6	6½
Gunn	10	10½
Do w	31	36
Gurney	9½	9¾
Do p	25½	25½
xGwilm	6	7
Hahn	11½	12
Do 1 p	15	16
xDo R	14	19
xHallnr	201	300
H Cot	16	17
H Carp	12¾	12¾
Hardee	10¾	11½
Do p	100	104
xHd Rck	10	10½
xHar-M	9	9½
Hartz A	12½	13
xHasaga	18	19
xH of L	8½	9
xHdway	24½	25
xHeath	5½	6
xHees	450	500
xHendsh	9	..
Do p	94	95
xHigh-B	151	170
H D	52½	53
Hi-T	7¾	8
xHold A	5½	6
xDo B	300	..
Holling	24½	24½
Holt Renf	..	17½
Ho O A	10½	10½
Do B	975	10
Horne	430	450
H Smith	43½	44
Do p	38	40
xHoyle	335	345
Hud B	47	47¾
HB O G	12½	12¾
xH-Pam	9	10
Hu O A	11½	13
Do B	..	14½
Do p	25½	..
Hur Er	53	56
xHydra	36½	38
Imp B	55¾	56
I Flo	34¾	38½
I In A	9½	..
Do P	19½	20
Do p	20½	22
Imp L	74	76½
Imp O	32¾	32¾
I Tob	11¾	12
Do p	5½	5¾
I Acc	31½	32
Do 450 p	83	84
Do 225 p	40½	47
Do 275 p	49	50½
Do wts	10½	11½
Inger A	5½	5½
xInglis	490	500
Ingr B	6	..
Do p	11	12
Inl C p	..	19¾
In G	5½	5½
Do p	14	14¾
xDo w	140	150
xInspir	38	38
Int Bro	13½	15
Do p	22	24
xI Moly	10	11
I Nickel	99¾	100¾
I Pete	42¾	42¾
Intprov	8	8½
I BC 55w	1	4
Do 59w	..	89
Int Pl	53½	54½
I Util	31½	32¾
Do pr	39¾	40
IP Stl	485	500
Inv Syn	37½	48
Do A	30½	30½
xIrish	160	162
xIrn B	230	235
Iroq G p	11	13½
xIso	43	44
xJ Wai	30	31
xJacobus	115	119
Jaica Pub	29	30
Jaica P.S.	13	13¾
xJaye	22	24½
Jeff	5½	5¾
xJellico	10	11
xJburk	10	10½
xJock C	220	225
Do p	9	9½
Do B p	8½	8½
xDo w	39	44
Jons-M	44	44½
xJoliet	25	26
xJonsm	14	15
xJows	37	38½
xJump P	16	20
xJupit	163	180
KEL D A	5½	6
xDo w	310	320
Kelvin	8½	9
xKenvil	6	7
Ker Ad	20¾	20½
xKil	335	350
Do w	115	117
xKirk M	36	38
xKirk T	9½	12
Labatt	25¾	26½
Labdor	23½	23¾
Lfge A	9½	10
xL Cin	65	80
xL Duf	71	73
xLklnd	240	250
xL Ling	7	7½
xL Osu	16½	18
xL Shor	400	410
xL Was	31	36
L Wds p	114	..
xLa L	405	420
xLamq	385	390
Lamb L	32	34
xLanda	211	250
xLangis	82	84
xLat Am	27	30
L Sec	24½	25¾
Laur A	12½	14
L J A	20½	..
Do B	22	..
xLeitch	138	140
xLenc	6½	8
Lewis Bro	10¾	..
xLexndn	3	3½
xLLL	185	190
LobGro	90	120
Do 1 p	27½	28
Do B p	29	29½
Do 2 p	48	..
LobCo A	23½	24½
Do B	23¾	25¾
Do p	41½	43
Do A w	550	595
Loeb	7¾	7¾
xL Hos	120	135
xDo A	210	400
xLIP	12	13
xL Point	50	54
xLorado	26½	27
xDo w	5½	6½
xLouvi	6	7
Lr St Lawr	29½	30½
Lown	22½	25½
xLyndh	15½	16
xLynx	9	9½
xMacas	266	275
xMacdon	27	28
xMacfie	5½	6
Mack Strct	9	10½
Do p	94	..
Mac L A	22	23½
xMac L	103	109
MacM A	37½	..
Do B	36	..
MB & PR	15½	16
xMadsn	292	293
xMagnt	7	7½
Magnum	15¾	..
Maher	22	24
Mailman	..	25
xMajtrn	2½	3
xMalart	91	92
xMan U	6	6½
M Su p	90	93
xMan Bar	69	90
M L G	27½	30
M L M	12½	12¾
Do p	..	90
xMralgo	14½	15
xMarcn	9½	10
xMargld	9	10
xMari	106	108
xMrtin	33	34
Mass-F	10	10½
Do p	100¾	103
Do 5¼	97½	98½
xMatat	8½	9½
xMaxw	475	475
xMayfr	90	105
xMaybrn	11	12
McB p	12¾	14
McC	32	..
McInt	24¾	25¾
xMKen	24	24½
xMMar	7	7½
xMWat	38	40
xMedal	190	195
xMent	16	18
xMerril	89	92
xMeta	8½	9
M LP	14½	14¾
Do p	12½	13½
xMidcon	50	51
Mid P	16½	18
xMidr	55	60
xMidW	155	160
xDo w	1½	2
xMill C	22	23
xMillik	85	89
xMilt B	255	280
xMinda	6	7
Min Cp	12½	12¾
xMin Or	7½	8
Mitchll Co	20	..
Mtchll Rob	12½	14
Do cl B	6	..
M C A	13¾	14
Mols A	..	22
Do B	..	22
Do p	40	40
M Kn	8	8
Do p	85	90
M Inv	50½	..
xMoneta	67	72
M Loco	..	16¾
Mtl Tr	42½	46
Moore	38¾	39
Do A	1824	..
Do B	2736	..
Morgan	28¾	30
Do 4¾%p	88¾	..
xMt Wrt	50	51
xMulti	40½	41½
xNama	16	17
National		
Nat Dir	15	15¾
Do p	14¾	15
xN Exp	5	8
N Groc	20	25
Do p	26½	26½
xN Hos A	375	..
xDo B	375	380
N Lead	91½	92½
xN Pet	238	250
N St C	14	14¾
Nat Tr	51½	52
xNealon	6½	7
xNello	11	12
Neon	16½	17
xNes L	12½	15
New		
xN Alg	6	7
xN Ath	28	29
xN Bid	16	16½
xN Cal	41½	42½
xN Conc	6	9
xN Cont	28	30
xN Dav	14	16
xN Del	13½	14
xN Dick	265	270
xN Gdvue	6½	7
xN Harri	12½	13½
xN Hos	80	81
xN Jas	7	8½
xN Kel	10½	11½
xNlund	19	20
xN Man	13	36
xN Myla	75	76
xNnor	5	5½
xN Rou	6	9
xN Sen	5	5½
xN Sup	55	60
xN Taku	17	21
Nia W	12	12¾
Do B	10¾	11½
xNick M	43	46
xN Rim	50	57
xNipis	125	130
xNisto	5	6
xNor-Ac	16	19
Noran	42½	42½
xNorbeau	82	84
xNogld	5½	6
xNorlar	21	21½
xNrmet	320	325
xNorpax	10	11
xNorsym	8	8½
xNorcal	11	11½
North		
xN Gate	52	53
xNCO	233	245
xDo w	74	80
Do p	21	21
xN Cold	102	105
xN Goldt	28	29
xN Rk	94	96
xNthsp	87	90
xDo A w	35	40
N Star	34½	34¾
Do A	19	19½
Do p	43	44
xDo w 57	150	160
Northern		
xN Can	110	113
No NG	14½	14¾
NQ P	25	26
Do 1 p	42½	46
xNor Ph	335	345
xDo w	50	105
Nthld U	16½	16½
NW U p	70	74½
xNthld	17	18
xNorval	12½	14
xN Bcage	81	100
xNudul	15	16
Oak W	14½	15
xObask	7	9
xOBrien	64	66
OC Cem	12½	12¾
Off Sp	15½	17
xOka R	11	14
xOkalt	50	53
xOLear	12	13½
xOB S	70	..
Do p	81	..
O Loan	27½	27½
O Stl	21	23
Do p	..	125
xOpem	675	690
xOrchan	123	124
xOrena	6½	7
xOrms	31	33
Oshawa A	6¾	7
xOsisk	31	33
Pac P	10½	10½
xDo w	700	750
Pge Hez	35½	36
xPall	31	50
xPamoil	36½	37
xPmour	61	67
xParam	9½	10
xPardee	18½	19
xParker	305	340
Patno M	335	340
xDo w	50	53
xPato	260	275
xPymst	22	23½
xPce Exp	13½	14
xPrless	23	24
Pbina	7½	7¾
Do p	..	43½
Pnmns	29½	30½
Do p	..	102
PCJI	22	25½
Do p	95½	..
xPmo p	67	70
xPerron	19	20
xPeruv	74	85
xPetrol	100	104
xPhil	65	75
Ph Eng	15½	16
xPck Cr	85	92
xPit-Or	6	6½
xPlace	71	73
Placer	11	11½
xPonder	19	22
xPortg	86	89
xP Rou	35	42
Pow Cp	52	53
xPrairie	220	233
xP Pipe	330	350
Prem T	151	155
xPres El	89	94
xPrest	460	480
Price Bros	80	83
xPrnto	270	280
xPros A	58	65
Prov Bk	38	39
xProv G	232	235
Prov Trns	14	14½
Do p	41½	44
xPrdex	6½	7
xQ Ascot	18	19
xQ Chib	23	24
xQ Cop	16	16½
xQ Lab	4	4½
xQ Lith	275	287
xQ Man	13	15
xQ Met	51	55
Qn Gas	17¾	17¾
QNGun	79½	79½
Do w	550	575
Que Pwr	34	34½
xQunst	14	15½
Quem	10½	10½
xQuin	405	..
Do A	11¾	..
xQnto	8½	9
xRdior	65	66
xRainv	25	30
xRanger	135	140
Rap-Gri	14¾	14¾
xRayro	50	52
xRealm	37	39
xReef	5	6½
xReeve	150	160
Reichld	22¾	24½
Reitmn	..	22
Do A	..	15
xRenab	168	185
xRexsp	29	30
Reyn p	80½	81¾
xRio R	6½	7
R Sk A	7¾	7¾
Do B	..	400
xRix	18	20
Rbtsn Jas	14½	15½
Robetsn	12	16½
Do A p	18	19½
Do 2 p	15	16½
xRobin	350	415
Do p	125	..
R Little	13¾	14½
Do A	15½	16½
xRoche	11½	12
xRckwn	23	24
xRky p	7	7½
Roe AV	5¾	6
Do p	78½	80
Rlland Pap	32½	34½
Do p	70	75
xRowan	8	9
Roy Bk	73	73½
Roy O A	10	10
xRoyalit	720	725
Do p	17¾	18
Russell	10½	10¾
xRyanr	11	13
StL C	11	11¾
Do p	15¾	16½
Do A p	90	96
xSt Maur	86	89
Sal	9	9½
Do w	475	500
xSan A	67	71
xSand R	8	9½
xSapph	64	69
Sap deb	38	43
xSarcee	102	104
xSatel	16½	18
Scfe A	10½	10¾
Scythe	13	13
Do p	22	24
xSec F	320	355
Selk A	5½	5½
Shawin	27½	27½
Do A	30½	31½
Do A p	38¾	39½
Do B p	42¾	42¾
Sher-Wms	42½	47
Do p	125	130
xShrt	275	280
Sicard	6¾	7
Sicks	24	24½
xSigma	400	410
Slknt	20	..
Do p	36	..
xSil Mill	33	35
xSil St	28	30
Silwd A	10	10½
Do B	10¾	10¾
Simon & Sns 5%p	86	90
Simpsn	29½	29¾
xSiscoe	93	95
xSKD	245	250
Slt	26½	27½
Slat p	40	42
xSlocan	9	10
Sogemines	21	23
Smvill p	46½	48
Stham	84	86
Sou Can	58	62
xSth U	16½	17½
Spartan	225	230
Do w	60	80
xSpoon	15	15½
xStdcona	8	8½
St Bds	34½	34¾
St Pav	15½	16½
Struct Stl	15½	17
Stand W	290	300
St Rad	13¾	14¾
xStanl	33	35
Do w	11	12
St B A	9	9¾
Do B	8¾	9½
xStnrck	35	40
xStnwl	41	46
xStarr	5	5½
Stedmn	35	35¾
Stl Can	75½	76
xSteeloy	4½	5
St R	10½	10¾
Stbg A	19½	19¾
Ster Tr	48	50
Stov p	6¾	7½
Stu O	18½	18¾
xStrgn	18½	21
xSub	115	117
xSud C	6½	8
xSulli	160	165
xSun Ex	18	19
S Prop	15½	17¾
Do p	20¾	22½
Do w	375	425
Stest o	13¾	15½
Do c	370	395
Do p	93	..
xSwitsn	315	320
xSylvan	72	80
Tmbln	23	23¾
Do p	38	..
Tancord	475	525
xTaurc	62	64
Do vt	55	58
Tay PC p	8¾	9
xTeck-H	178	180
xTemag	188	190
xTerrit	33	38
xTexst	130	150
Texaco C	50	50½
Do p	77	77
xTho L	60	64
xThom P	275	300
Thorncl	8½	9¾
xTiara	5	6
xTidal	89	90
TT C A	6½	7
TT Tlrs	14	17
xTmbill	47	49
xTorbit	30	31
T-D Bk	51	51½
T Elev	11½	12
T Gen T	43¾	43¾
T Iron	16½	19
Do A	16	18
Tor Mor	300	..
T Star p	58	59½
xTowag	7½	9½
T Fin A	32	32½
Do B	31½	34½
Do 4½	..	86
Do 5	31½	33
Do A r	15	18
Do B r	15	..
Do w 56	150	200
Do w 57	380	400
xTr Can	50	55
T R C Pl	22½	22¾
Tr-Mt	9¾	9¾
Tr PPL	15	15½
xTr Res	16	18
xTriad	330	335
xTribag	33	37
xTrin	13	15
T W CG	5	5½
xUlt-Sh	10	11
Un A	9	9½
Do 1 p	45	43½
Do 2 p	48	49½
U Gas	15	15½
Do p	50	50
xU Min	21	21½
xU Asb	405	420
xU Can vt	92	100
U Cp A	24	29½
Do B	19¾	21
U Fl A	50½	54
Do B	42½	43
xU Keno	580	590
xUn F	20	21
xU Oils	151	155
Un Stl	7½	7¾
U Cont	13½	13¾
xUpp C	112	114
xVanad	198	225
xVando	5	6
Ven Pow	200	225
Do p	5¾	6
Vent	23½	24
Vlau	75	..
Vicroy A	6¾	7
Do B	315	340
V G Tr	37	38½
xViolm	139	140
V Dar p	14¾	15
xWain	205	225
xWaite	640	660
W G W	33¾	34
xW Eq	425	450
xWayne	9½	10
xWeb Kn	270	275
xWeedon	6½	7
xWernr	10	11½
xWspac	17	18
xWstate	152	170
xWbrn	65	67
xW C O G	163	164
Do w	57	64
xW Mal	4½	6
West	14	14½
W C Br	32½	32¾
xW Cop	305	350
Do w	105	115
xW Dec	121	128
W G A	34	34½
Do p	24½	24½
xW Lee	350	350
xW Nac	44	47
W Ply B	15	15½
xW Surf A	24	25
Wstn A	29¾	30½
Do B	29¾	30¾
Do p 4½	83	85
Do p 6	101	102
Do A w	10½	11¾
Wh 1 p	32	33
Wh Pass	7	7½
xWlroy	132	134
Do w	..	70
xWiltsy	10½	11½
xWinch	6½	7
xWdfall	12½	13
W Alx	475	475
W GH p	92¾	..
Wood A	26½	27
Do p	82¾	88
Wdrd A	16¾	17½
Do w	565	575
Wl Cb	7	..
xWr H	125	129
xYale	19	20
xYan C	44	54
xYellor	8	9
xYk B	106	108
Do A	150	150
Do B	22	30
xYoung	79	81
xYukno	4	5
Zell 4½%	41½	42
xZenith	265	270
xZenmc	23	24
xZulapa	22	25

x—Quoted in cents.

DIVIDEND NOTICES

HOLLINGER CONSOLIDATED GOLD MINES, LIMITED

DIVIDEND NUMBER 442 AND EXTRA DIVIDEND

A regular dividend of 6c per share, and an extra dividend of 6c per share, has been declared by the Directors on the Capital Stock of the Company, payable on the 31st day of March, 1960, to shareholders of record at the close of business on the 3rd day of March, 1960.

DATED the 15th day of February, 1960.

P. C. FINLAY, Secretary.

ROBINSON, LITTLE & COMPANY, LIMITED

DIVIDEND ON COMMON

NOTICE IS HEREBY GIVEN that a dividend of Twenty (20) cents a share has been declared on the Common Stock of the Company payable on the 31st March, 1960, to shareholders of record at the close of business on the 15th March, 1960.

JACK L. MacDONALD, Secretary.

Belding-Corticelli Limited

Notice of PREFERRED STOCK DIVIDEND No. 181

A dividend of one and three-quarters per cent (1¾%) has been declared on the Preferred Stock of this Company, for quarter ending March 31st, 1960.

The above dividend is payable on the 2nd day of May, 1960, to shareholders of record at the close of business the 31st day of March, 1960.

By Order of the Board,

R. H. ALSTON, Secretary-Treasurer.

LOBLAW GROCETERIAS CO., LIMITED

Notice is hereby given that a dividend for quarter ending April 14, 1960, has been declared on the capital stock of the Company as follows:

First Preference Shares, Cumulative Redeemable Series, "B" per share 40 cents

The dividend will be payable April 14, 1960, to shareholders of record at close of business on the 16th day of March, 1960. The transfer books will not be closed. Payment will be made in Canadian Funds.

By Order of the Board.

R. G. MEECH, Secretary.

Toronto, February 9, 1960.

Abitibi

DIVIDEND NOTICE

Notice is hereby given that dividends, in the respective amounts per share set out below, have been declared payable April 1, 1960 to shareholders of record at the close of business March 1, 1960 on the following outstanding shares of ABITIBI POWER & PAPER COMPANY, LIMITED:

Preferred: 28⅛c per share
Common: 42½c per share

By Order of the Board.

CRAIG DICK, Secretary

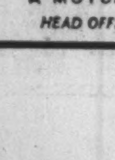
Toronto February 12, 1960

96th CONSECUTIVE DIVIDEND

A quarterly dividend of 8c per share payable March 21st, 1960 to shareholders of record February 19, 1960, has been declared by the Directors of Corporate Investors Limited.

A "Brief Description" outlining the many excellent investment features of the Fund is now available.

Ask your Dealer or Broker for details



corporate INVESTORS

A MUTUAL FUND—FOR FAMILY PROTECTION

HEAD OFFICE: 1106 C.P.R. BUILDING – TORONTO – CANADA

Canadian Stock Exchange

INDUSTRIAL

Stock	Ask	Bid
Abitca L	25	28
Beld Cort	10	12½
Do p	10½	..
Belg'm St	7½	10
Do p	13½	..
Blue Bonnets R'way	8¾	9
Bt'fly Ho.	210	..
C Floor B	13	15
C Arena	160	..
C I Invest	20½	22
Do p	77½	..
Cdn P&P	6½	6¾
C Silk A	190	210
C'zano A	130	..
C Div A	90	99
Do p	30	..
C Textiles	..	17
Crain RL n	20½	21½
D & Fr A	..	48
Dalfen's	140	150
Dom. Eng.	17	18
E Koot p	115	..
Feralco I	..	100
Freiman C	32½	..
Horner A	23½	25
Hub Flt	8	..
Do A	20	21
I Paints A	10	15
Do p	18	..
Inv Found	40	46
Do p	52	57½
L'bert A	13	13½
Do B	24½	25¾
Lochaber	150	..
Melchers	..	8
Do p	11½	12½
Mtl Refg	18	..
M Roy Dry	8½	9
M Ro Rice	23	..
Mussans	..	10½
Nfld L&P	48½	50
PAC Atl	300	315
Pat Mfg	8	9
Do p 7%	19	22½
Paul S S	..	8
Po Crp 1	41	43½
Do 2nd	64½	70
Prem Steel	7½	7¾
Que-Tal	32½	32¾
Do warr	13½	14½
Do A	18	20
R&M Brng	16	..
Renold A	16½	18¾
Sangamo	11½	12½
S & S n	7½	7½
Sou C p	115	117
Soca Ltd	200	225
Sobeys St	11¾	12
Tke Bros	10	35
Tr C Freez	5¾	..
Tr C Corp	31	35
Un Amu A	12	..
Do B	12	..
Do vt A	12	..
Unit Dist	..	8
U Pr Prop	215	220
W'terman	490	495
Win Hotel	..	30
Wood Mfg	..	37
W'dford A	50	..
Beatrice	4	5
Bel'chasse	43	44
Be Pl Min	40	43
Belle-Chib	5	6
Bornite	5	5½
Burnt Hill	18	20
Calumet U	3½	4
Canalask	5	6
Canorama	56	58
Canuba	4	6
Carbec Min	8	9
Cartier Q	18	20
Cen Man	4	6
Chess Min	7	10
Chipman	5	7
Chib Cp C	14	16
C'emalloy	294	300
Cominga	3	8
C Bi-Ore	6½	9
C Monpas	8	9½
C Que Yell	6	..
Doisan	9	9½
Fab Metal	13½	14
Fano	4	4½
Fatimo	53	60
Fontana	4	5
Fundy Bay	9	10
Gold Age	43	45
Gui-Por U	7	10
Haitian	5	6
H'crest Cl	245	275
I Ceramic	9	12
Iso Uran	42	45
Kontiki L	5	7
Lingside	4½	5
Lithium	15	17
Mid-Chib	26	28
Mogador	9	11
Monpre	21	23½
N Formaq	15½	16
N Jack L	4	7
N S'tiago	4½	5
N Vinray	7	7½
N W Amu	73	75
Nocana	7	8½
N A Asb	6	8
N A Rare	60	69
Obalski	13	15½
Opemiska	16	17
Orchan U	120	125
Partridge	9	10
Paudash	45	47
Pennbec	30	32
Pitt	3½	4
Por Prime	5	6½
Portage	87	91
Q Cobalt	150	165
Q Smelt	15½	16
Roberval	28	33
Red Crest	3	..
St L Min	575	580
S Dufault	23½	25
Std Gold	8½	11
Tache L	10	10½
Tazin	10½	11
Tib Expl	9½	12
Trebor	3	4
Vanguard	47	48
Virgin Min	8	8½
Wendell	3½	4½
Westville	4	4½

MINES—Cents

Stock	Ask	Bid
Alscope	15	16
Ameranium	3½	4
Anthonian	7	8
Arno	6	6½
Atlas Sulp	7½	8½
Aug Expl	28	29
Baker Tal	18	23
Band-Ore	4½	7
Barvallee	4½	5
Bateman	26	28

OILS—Cents

Stock	Ask	Bid
Bluewater	18	24
Bonn'lle	21	25
Castle Oil	5½	6½
Futurity	30	32
Gaspe	5	6
Gateway	2	..
Israel C	12	..
N Spr Coul	4	5
Quebec Oil	3½	4
Titan Pet	28	31

Calgary Oils

Quoted in cents

Stock	Ask	Bid
Albedena	4½	5
Ald-Leduc	4	6
Amalta	2	3
Barons	3½	4
Bash Led	5	7
Blue Cr	23	27
C Fortune	2¾	3½
Castle Oil	14	14½
Century	1¾	2
Claybar U	13	17
Command	55	100
Com. Min.	14½	17
D L'holds	135	140
Dom. Min.	1¾	2
E Can Gas	2½	4
Edoran	4	5½
Golden Sat	3½	..
Gold Spike	4¾	5
Ind Chem	..	70
Kenare Pet	2½	..
Keno	27½	29½
Leamac P	5	6
Leduc Cal	7	7¾
Ldmstr De	20	..
Merit	54	56
Merland	12	14
Mill Creek	11½	12
Mollusca	8	..
Monarch	1½	2
N Richfield	4	5
N Y Oil	10	12½
N Cont'tal	1½	1½
Nuco Pet	7¾	9
Pamoil	36	..
R'chmen's	9	..
Renfrew	3	3½
R C Vent	14	..
Sage	71	79
Sastex	2	4
Share	4½	7
Silver City	3	..
Siscalta	51	86
Sturgeon	4¾	6
Transfield	2½	3½
Tri-Zone	3½	7
T Valley	16	19
W Warner	6	8

Toronto Curb

Stock	Ask	Bid
Andian	6	7¾
A C	..	38¾
Ang-N	7½	7¾
Asbest	22¾	22¾
B A B	50	53
xBulolo	430	440
CD Sug	16½	16¾
C Ving	31	32
C Brnze	22	22½
Do p	..	90
CK Inv	31½	32½
C Ing	37¾	39½
C Marc	5	5¾
C Pap	39¾	39¾
xDalh	19½	20
de Hav	155	299
D Glass	80	82
Do p	13½	13¾
DOC	37	37½
Du Pont	21¾	22½
Do p	74	74½
Gaspe	20½	22
Hayes	24	25
I Pap	103½	106
Lob I n	12½	13
M Lrn	81	87
MO Pap	27¾	28½
Ogilv	40¾	42½
Do p	123	140
xPend O	261	280
Price	39¾	41
Sngmo	11½	12½
xSW P	150	180
Th CG I	6½	6¾
xYuk C	65	69
Zellrs	..	32½
(xToronto Gold)	33.20	33.45

x—Quoted in cents

Record of Financing

Sales by Municipalities, Provincial and Dominion Governments. Offering of Corporations and Securities.

DOMINION

Government of Canada Treasury Bills—Due May 6, 1960, and Aug. 5, 1960, $135,000,000. Issued Feb. 5, 1960. Offered at $98.827 to yield 4.76% and $97.570 to yield 4.99%.

Government of Canada — 5½% bonds, due Oct. 1, 1962 and April 1, 1963, $300,000,000. Issued Feb. 1, 1960. Offered through dealers and banks at $99.50 and $99.25.

MUNICIPAL

Town of Gananoque, Ont. — 6½% debentures, due Aug. 1, 1960-74, $343,749. Issued Jan. 29, 1960. Sold at $97.535 to Cochran, Murray & Co. Ltd. and Bank of Montreal.

Town of Asbestos, Que. — 6% debentures, due Feb. 1, 1961-70, $200,000. Issued Feb 2, 1960. Sold at $95.53 to Placements Kennebec, Inc.

Township of Gosfield South, Ont. — 6½% debentures, due Feb. 15, 1961-80, $99,797. Issued Feb. 1, 1960. Sold at $96.50 to Bell, Gouinlock & Co. Ltd.

Township of Kingston, Ont. — 6% debentures, due Feb. 1, 1961-80, $112,580. Issued Feb. 1, 1960. Sold at $92.60 to Bell, Gouinlock & Co. Ltd.

City of St. Therese, Que. — 6% debentures, due Feb. 1, 1961-80, $243,000. Issued Feb. 1, 1960. Sold at $92.299 to Credit Interprovincial Ltee and Royal Bank of Canada.

Town of Windsor, Que. — 6% debentures, due Feb. 1, 1961-70, $55,000. Issued Feb 1, 1960. Sold at $96.50 to Placements Kennebec, Inc.

Township of Blanshard, Ont. — 6½% debentures, due Mar. 1, 1961-80, $150,000. Issued Feb. 2, 1960. Sold at $97.40 to J. L. Graham & Co. Ltd.

Town of Deep River, Ont. — 6½% debentures, due Feb. 15, 1961-80, $404,939. Issued Feb. 3, 1960. Sold at $96.50 to Bell, Gouinlock & Co. Ltd. and J. L. Graham & Co. Ltd.

CORPORATE

Imbank Realty Company Limited — 6¼% first mortgage bonds, series "B," due Jan. 15, 1980, $7,500,000. Issued Jan. 19, 1960. Offered at $100.00 by Dominion Securities Corpn. Ltd.

Simpson-Sears Acceptance Company Limited — 5⅞% secured debentures, series "C," to mature Feb. 1, 1980, $5,000,000 (U.S.). Dated Feb. 1, 1960. Sold privately to Wood, Gundy & Co. Inc. and Goldman, Sachs & Co.

COMMON

Vickers-Crow Mines Inc. — 150,000 common shares. Offered at $2.00 per share by Lampard & Co. Ltd.

Grain Prices

Winnipeg Futures

Week to Feb. 16, 1960

Crop year from Aug. 1, 1959 High	Low		High for Week	Low for Week	Close Feb. 16
		Oats—			
.81¾	.74½	May	.79½	.78¾	.78¾
.80¾	.71¾	July	.78¾	.77½	.77½
.77¾	.75½	Oct	.76½	.75½	.75¾
		Barley—			
1.02¾	.96	May	1.00¾	.98½	.99¾
1.01½	.95¾	July	.99½	.98½	.98½
.99½	.97	Oct.	.98½	.97	.97¾
		Rye—			
1.29¾	1.09½	May	1.15½	1.13½	1.13¾
1.25¾	1.08½	July	1.13¾	1.12½	1.12¾
1.12¾	1.08½	Oct.	1.12¾	1.12	1.12
		Flax—			
4.01	3.19½	May	3.31½	3.26½	3.27½
3.90	3.13¾	July	3.23½	3.19	3.20½
3.20	3.02½	Oct.	3.06¾	3.03½	3.04

Chicago Futures

Week to Feb. 16, 1960

Crop year from Aug. 1, 1959 High	Low		High for Week	Low for Week	Close Feb. 16
		Wheat—			
2.06½	1.97½	Mar.	2.01½	1.98½	1.99¾
2.03¾	1.96¾	May	2.02½	2.00	2.01½
1.86¾	1.81½	July	1.86¾	1.84¾	1.85¾
1.93¾	1.90¾	Dec.	1.93¾	1.92¾	1.92¾
		Wheat (1960)—			
1.89½	1.83¾	Sept.	1.89½	1.87¾	1.87¾
		Corn—			
1.19	1.12	Mar.	1.14¾	1.13¾	1.13¾
1.20¾	1.15½	May	1.17¾	1.16¾	1.16¾
1.21½	1.17	July	1.20	1.18¾	1.18¾
1.18½	1.14½	Sept.	1.16¾	1.16	1.16¾
1.11¾	1.09½	Dec.	1.10¾	1.09¾	1.10
		Oats—			
.77¾	.70	Mar.	.75½	.73¾	.73¾
.76½	.68¾	May	.73½	.72½	.72¾
.68½	.63½	July	.67½	.66¾	.67
.68½	.63¾	Sept.	.68¾	.65¾	.66¾
.68½	.66½	Dec.	.68½	.67½	.67¾
		Rye—			
1.41½	1.23½	Mar.	1.26½	1.23½	1.25½
1.40½	1.25½	May	1.28¾	1.25½	1.27½
1.34¾	1.22½	July	1.25¾	1.23½	1.25
1.28¾	1.22½	Sept.	1.26½	1.24¾	1.25¾
1.28¾	1.26½	Dec.	1.28½	1.26½	1.27½
		Soybean—			
		Mar	2.13¾	2.11¾	2.12½
		May	2.16½	2.13¾	2.14½
		July	2.16¾	2.13½	2.14¾
		Sept.	2.11	2.09½	2.10½
		Nov.	2.09½	2.07¾	2.08½

Winnipeg Cash

	High For Week Feb. 16	Low For Week Feb. 16	High Prev. Week	Low Prev. Week
Oats—				
2 C. W.	.79½	.78¾	.79¾	.75¾
3 C. W.	.75¾	.75	.76¾	.75¾
Barley—				
1 Feed	.93¾	.93	.93½	.94
2 Feed	.91¾	.90½	.91¾	.91½
1 Malt	1.03¾	1.02½	1.03¾	1.03½
Rye—				
1 C. W.	1.10¾	1.10	1.10¾	1.09
2 C. W.	1.10¾	1.10	1.10¾	1.09

Chicago Cash

	High For Week Feb. 16	Low For Week Feb. 16	High Prev. Week	Low Prev. Week
Corn—				
2 Yell.	..	..	..	..
Oats—				
H. W.	.77½	.76¾	..	..

Dividend Changes

CHAMPION MUTUAL FUND OF CANADA—Capital, 4c payable Feb. 29, to holders of record Feb. 15. Total payable to date in 1960, 4c; total paid to same date in 1959, 5c; total paid in 1959, 20c plus 1c extra. Bid: $5.32; Ask: $5.85.

NATIONAL LIFE ASSURANCE — 100% paid, 20c payable May 2, Aug. 1, and Nov 1, to holders of record April 26, July 25 and Oct. 25, respectively. First dividends declared following ten-for-one stock split, Feb. 3, 1960. Bid: $56; Ask: $60.

G. TAMBLYN — Common, 20c payable Apr. 1 to holders of record March 4; ex-dividend March 2. Total paid or payable to date in 1960, 35c plus 45c extra; total paid to same date in 1959, 30c plus 40c extra; total paid in 1959, 60c plus 40c extra. Recent price: $24½.

Municipal Bonds

Feb. 16, 1960

			Bid	Ask	Yld. %
Halifax	4¼	'71	82¼	84¼	6.25
Hamilton	6	'79	95¼	97½	6.22
Metro. Tor.	6	'79	96	98	6.18
Montreal	6	'79	94	96	6.35
Ottawa	5½	'79	90¾	92¾	6.15
Regina	5¾	'82	88	90	6.60
Vancouver	5¾	'77	90¼	92¼	6.50
Winnipeg	5¼	'77	87¾	89¾	6.25

Gold Bars Quoted

Rate Reported by Doherty, Roadhouse & Co., Toronto.

Canadian kilo bars of gold approximately 32 oz. each.

Feb. 16, 1960

	Bid	Asked
	—per oz.—	
Latest week	$33.20	$33.45
Previous week	$33.15	$33.45

K. A. POWELL (CANADA) LTD.

GRAIN SHIPPERS AND EXPORTERS
GRAIN FUTURES

Owners and Operators
Fort William Terminal Elevator Co. Ltd.
and Powell Transports Ltd.

Head Office—563 Grain Exchange, Winnipeg, Man.
Affiliated Companies—Fort William, Ont., Montreal, Que., Vancouver, B.C.

N. M. PATERSON & SONS LIMITED

FORT WILLIAM WINNIPEG MONTREAL

GRAIN DIVISION
Grain and Coal Merchants
Country and Terminal Elevators

STEAMSHIP DIVISION
Carriers of All Bulk Cargoes

FEDERAL GRAIN LIMITED

AND

THE ALBERTA PACIFIC GRAIN CO. (1943) LTD.

WINNIPEG CALGARY

Country Elevators located in all Prairie Provinces, and Terminals at Fort William, Port Arthur and Vancouver. Cereal and Forage Seed Plant at Winnipeg.

We invite your inquiries regarding feed and seedgrain.

McCabe Grain Company Limited

WINNIPEG, CANADA

LONDON, ENGLAND VANCOUVER

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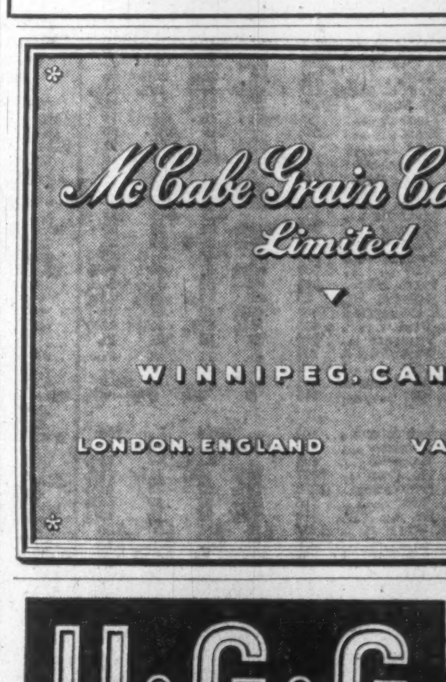

797 COUNTRY ELEVATORS

GRAIN TERMINALS AT PORT ARTHUR AND VANCOUVER

UNITED GRAIN GROWERS LTD.

CALGARY · REGINA · WINNIPEG · SASKATOON · EDMONTON

THE WEEK'S QUOTATIONS

Quotations here listed are the official, exchange prices for listed stocks including curb market quotations. For unlisted stocks, quotations by unlisted dealers are given. The Financial Post cannot accept any responsibility for these quotations.

Montreal and Toronto Winnipeg, Calgary and Vancouver

Bid and Ask quotes of Toronto and Montreal exchanges up to press time are published on page 43

Industrial Stocks

WEEK ENDING FEBRUARY 12, 1960

Range 1959-60 High	Low	Div. Y'ld R'te	Feb12 $	%	Company	Sales	Last Feb. 5	Week end. Feb. 12 High	Low	Close or Latest
1.00	.24		..	..	Abitca Lumber	13400	.26	.27	.26	.26
41¾	33	1.70		4.6	Abitibi	9003	37½	37¾	36¼	36⅝
24	21⅞	1.12½		5.1	Do. 4½% pref.	850	22½	22¼	22¼	22¼
12	9	.60		5.7	Acadia Atlan.	100	10½	10½	10½	10½
98	90	5.00		5.6	Do. 5% pref.	10	90	90	90	90
22	18	1.20		6.4	Do. (A)	600	18	18¾	18¼	18¾
17¾	17¾				Admiral	nil	..	B18	A18⅜	17¾
21	12½	.70		3.4	Agnew Surp.	2520	19¾	21	19⅝	20½
4.50	2.25	..		..	Alaska Y. Pipe	nil	..	..	A2.50	2.50
2.00	.70	..		..	Alaska Refin.	nil	..	..	A.75	.75
13	5	..		..	Do. pref.	nil	..	..	A7.00	6½
3.60	2.50	..		..	Albt. Dist.	3155	2.60	2.60	2.50	2.50
2.80	1.95	..		..	Do. V.T.	4850	2.00	2.00	1.95	1.95
1.85	.90	..		..	Do. S. Pur. W.	800	.95	.94	.92	.94
30	21⅜	..		..	Albt. Gas Tr.	9146	25½	25¾	24⅝	25
23½	16½	1.25		..	Algoma Cent.	377	18¼	18¼	17⅞	18
72	57	3.00		5.3	Do. 6¾ pref.	85	57	57	57	57
10 75	5 10			..	Do. Warr.	400	5.50	5.60	5.50	5.60
42¼	34½	*.30		..	Algoma Steel	6672	36	37	35½	35⅝
9	7	1.25		..	Algonquin	885	7⅜	7¾	7½	7¾
20	19	1.30		7.3	e Do. pref.	nil	..	B18	A19	t17¾
37⅜	26⅛	*.15		..	Aluminium	27355	30⅜	31¼	29¾	31
22	19¼	1.00		5.0	Alum or Can 1st p	2740	20	20½	20	20
45⅝	41½	2.25		5.4	Do. 2nd pref.	1015	42	42½	41⅝	42
12.50	5 50			..	Analogue	916	6.62½	6.87½	6.50	6.50
7.00	2.50			..	Do. Warr.	700	3.50	3.05	3.05	3.05
7	3				a1.00+$*	nil	..	..	..	6¼
25	22½	.50		2.1	Anglo Can. Oils. (Brandon)	nil	..	B25½	..	24¼
46	37½	2.00		5.3	Ang. Cdn. Pulp.	50	40¼	38	38	38
53	48	2.80		5.7	Do. pref.	65	49	49½	49	49
43	37	2.25		6.1	Ang. Can. Tel. p	130	37	37	37	37
49¼	48	2.90		5.9	Do. $2.90 pref.	nil	..	B46¾	A48½	49
8½	6¼	.20	+*.10		Ang. Nfld.	5850	7½	7½	7	7⅛
					Angl-Scand. Inv.	nil				
45	32½	1.40		4.2	Anthes Imp.	200	37½	36	33	33
100	92	5.50		6.0	Do. 5½% pref.	nil	..	B90	A92	92
42¼	29	1.00		3.4	Argus	3178	29⅜	29½	29	29
93	64½	2.40		3.7	Do. A pref.	nil	..	B56	A71	64½
48⅝	43	2.50		5.7	Do. B pref.	700	43½	43⅝	43½	43½
					a1.00+$*	nil	..	..	..	..
36½	23	1.20	+.20		Asbestos	3647	23½	23¾	23	23
9.00	4.85	*.20			Ash Temple	nil	..	B7.75	A8.00	7.75
†96	†90	6.00		6.7	Do. (A)	nil	..	B92	..	†90
9⅜	8¼	.65		7.2	Do. (B)	100	†9½	9	9	9
10	10	.60		6.0	Ashdown Hd. A.	nil	..	B11	A12½	10
16½	13¼	.72		5.3	Do. (B)	250	†13⅜	13¾	13¼	13½
			a4.00+*$	.20	Assoc. T&T pf.	nil	..	..	A.75	101
14½	5⅞				Atlan. Accept.	410	†16¼	13	12	12¼
19½	15	1.10		5.6	Do. pref.	nil	..	B16	A18	†19¾
29⅝	24	1.00	+*.25		Atlas Steels	1625	24½	24¾	24	24
34½	18¾	*.35		..	Auto Electric	550	26	26	25¼	26
10.00	6.00	*.15	+$.15		Auto Fabric	nil	..	B7¾	A7½	7¼
4.50	2 25			..	Do. (B)	nil	..	B3.00	A3.35	3.35

B

63⅝	51	1.60	+2.35		Bk. Can. 'Nat.	471	52¾	53	52¼	52¾
62¾	50½	1.60	+1.25		Bk. Montreal	8085	51¾	52	50½	50¾
84½	64½	2.20	+2.10		Bk. N. Scotia	2426	66½	66¾	64½	64⅝
45	33	1.00	+1.25		Bk. Provincial	1240	39	39¾	39	39
..	..	3.20	+12.40		Barber-Ellis	nil	..	B70	..	..
		3 50			Do. pref.	nil	..	..	..	..
4.85	3.00	..		..	Barcelona	nil	..	B4.50	..	15.25
6⅝	6⅝	..		..	Bates & Innes A	nil	..	B5	A8	6¾
52	39½	2.00		5.1	Bathurst Pr. A	735	39½	39	38½	39½
36	27	..		..	Do. B	1133	27	27	27	27
13.37½	6.37½	.40	+.10		Beatty Bros.	800	7.25	7.00	7.00	7.00
30	23	1.00	+2.25		Beaver Lumber	350	23¾	23	23	23
18½	16	1.00		6.2	Do. (A)	nil	..	B16¼	A16½	16¼
28	25½	1.40		5.4	Do. Pref.	nil	..	B27	A28	26
13½	10⅝	$*	1.25		Belding Cor.	nil	..	B10	..	12
12½	11	.70		5.8	Do. pref.	nil	..	B10¼	..	12
8	7				Belgium Stores	nil	..	B7½	A10	7
13⅞	13	..			Do. Pref.	100	†13½	13⅞	13⅞	13⅞
44½	39¾	2.20		5.1	Bell Telephone	23581	43¼	43⅜	43½	43⅜
8	7¼	.40		5.7	Biltmore Hats	nil	..	B13½	A7	17
14½	12¾	1.00		7.4	Do. A Pref.	100	13	13½	13½	13½
53	47	2.40	+.40		Bird Constr.	nil	..	B55	..	55
11¾	8	$*.20			Blue Bonnets	120	8½	8⅝	8⅝	8⅝
2.75	1.40	..		..	Do. Warr.	50	1.40	1.20	1.20	1.20
49½	44	2.75		6.0	Bowater Mer. P.	200	46	46	46	46
10.87½	6.00	$.364		..	Bowater Pap.	3500	9.75	9.75	9.50	9.50
47	39¾	2.50		5.9	Bowater N.A. 5% pf.	585	41½	42½	42	42⅜
50½	45	2.75		5.9	Do. 5½% Pref.	420	46¾	47	46¾	46¾
39½	19½	1.00	+1.50		Bowes Ltd.	nil	..	B27	A30	30
9½	6½	.60		8.6	Boyles A	100	7	7	7	7
5¾	4	..			Do. (B)	nil	..	B4.00	A5.00	4.00
7.62½	4.25	..			Brazilian Tr.	16350	4.25	4.45	4.25	4.40
90	90	6.00		7.1	Do. Pref.	nil	..	B75	A89¾	85
25	19	1.20		5.5	Bridge & Tank	460	22	22½	22	22
48	44	2.90		6.4	Do. Pref.	287	47	46	45	45
50	37¾	1.00		2.4	Bright T. G.	10	42	42	42	42
21	20	1.00		5.8	Do. 5% Pfd.	nil	..	B20	A23½	120
53	42	$1.70	+1.80		Br. Am. Bk. Notes	nil	..	B52	A55	†52
43½	31¼	1.00		3.2	Brit. Amer. Oil	14610	32¾	32½	31¼	31½
78	68¼	4.00		5.7	B.C. Elect 4% Pf.	35	70¼	70¾	70¼	70¼
41½	35¾	2.12½		5.7	Do. 4¼% Pref.	170	37¼	38	37	37
43	37½	2.25		5.8	Do. 4½% Pref.	160	38	39	38	38½
91	81	4.75		5.8	Do. 4¾% Pfd.	470	82½	82½	82	82½
49	42½	2.50		5.7	Do. 5% Pfd.	97	44¼	44	43	44
52½	47	2.75		5.6	Do. 5½% Pfd.	150	49½	49	48¾	49
18	11½	*.12½			B.C. Forest	3315	12½	12½	12⅛	12¼
13	8	.75		5.2	B.C. Packers A	nil	..	B14	A15½	14½
18	13½	1.00		7.1	Do. (B)	225	14½	14½	14	14
36	32½	1.40		4.2	B.C. Power	11221	33¾	33¾	32½	33⅛
47¾	39¼	2.20		5.2	B.C. Tele.	1025	42¾	42¾	42¼	42½
1.25	90	..			B.C. Turf	300	1.15	1.10	1.10	1.10
11½	..	..			Brockville Pf.	8225	11¼	11¼	10⅜	10⅞
18	17	1.04		5.8	Brooke Bond Pf.	425	17	18	17	18
14⅞	9¼	$*.30	+*		Brown Co.	2212	10	10¼	9½	10⅛
13½	8¼	$.30			Bruck S. Mills A	475	9	10	10	10
5.00	2 20	..			Do. (B)	44	2.75	2.70	2.70	2.70
39	28⅜	1.80		6.0	Build Prod.	970	31	32	30	30¼
7	5½	.50		8.7	Bulloch's A	nil	..	B5½	A6	5¾
5¾	5	.35		7.0	Do. (B)	10	5	5	5	5
24	16¼	.60	+.25		Burlington St'l.	405	17	17	16½	16½
14¾	11¼	.80		6.1	Burns & Co.	3435	13¼	13¼	12⅞	13⅛
8	5½	.45		7.2	Burrard D. D. A	955	6	6½	6	6¼
9½	9	*.15			Burrard Mfg.	143	9	9	9	9
3½	2½	..			Do. Warr.	nil	..	B2¼	A3	2½
2.75	1 75	..			Butterfly Hos.	nil	..	B2.10	..	2.50

C

20	17⅜	†1.10			Calgary Pow.	13230	17½	17⅜	17⅜	17½
103	94½	5.00		5.3	Do. 5% Pref.	nil	..	B92¼	A94½	95
Canada										
5.50	3.70	.10		2.7	Canada Bread	100	3.75	3.75	3.75	3.75
58	55	2.50		4.6	Do. Pref B	nil	..	B54⅜	..	†54⅜
37	26¾	1.00		3.8	Canada Cement	6584	30¾	30¾	30	30
28	25	1.30		5.0	Do. Pref.	283	26	26½	25½	26
23¼	12½	1.20			Can. Cr. & C. Stone	115	16¼	15½	15½	15½
27¼	15⅞	.60		3.7	C. & D.-Sugar	5198	16½	16⅜	16	16¼
15½	14	1.00		7.1	Can. Floor B	75	†13	14	14	14
24½	20	.60	+1.20		Can. Foils	nil	..	B19	A20	20
25	21	.60	+2.53		Do. (A)	25	21¼	22	22	22
12	12	..			Can. Forg.	nil	..	B8	A15	12
30	25¼	1.50		6.8	Do. (A)	nil	..	..	..	A23
37¾	19½	1.50		7.1	Can. Iron	5712	21⅜	21½	20	21
101	80	4.25		5.7	Do. 4¼% Pref.	25	80	175	175	175
15	8	1.50			Can. Machine	nil	..	B11	A15	15
76½	53	2.00		3.8	Can. Malting	570	†52½	54	53	53
28	24	1.17		4.9	Do. 4½% Pfd.	225	24¼	24¼	24	24
57	45½	†11.75			Can. Packers A	490	47	48	46½	46⅞
53	44½	†11.75			Do. (B)	100	47½	47	46½	46½
70	54½	2.00		3.7	Can. Perm. Mtg.	295	55	55	54½	54½
91	80	4.40		5.5	Can. Safeway Pf.	10	80	80½	80½	80½
49¼	39¼	1.40		3.4	Can. Steamships	906	43¼	43	42	41
13	10¾	.62½		5.5	Do. Pref.	635	11½	11½	10⅞	11⅜
38½	28	1.20	+2.20		Can. Vinegars	175	32	32	31	31
8	8	..			Can. West Cord A	nil	..	..	..	..
					Do. (B)	nil	..	..	..	..
115	100	4.00		4.0	Can. W. Cable A	nil	..	..	..	†100
13½	7⅛	1.50		..	Do. (B)	275	9	8½	8¼	8½
Canadian										
155	150	14.00		..	Canadian Arena	nil	..	B160	..	155
19½	14	..		..	Cdn. Aviation	250	14¼	15	14	14
8½	6	$.25		..	Cdn. Bakeries	nil	..	..	B5½	A7
68⅞	51	1.60	+*.25		Cdn. Bk. Com.	5627	52¾	52¾	51½	51⅝
42¾	33½	1.60		4.4	Cdn. Breweries	8538	36½	37	36	36½
42½	34	1.25		3.5	Do. Pfd.	755	36½	37	36	36½
17⅞	8	..			Cdn. Br. Al.	467	12½	13	12	12¾
10.00	4.10	..			Do. Warr. A	1480	6.15	6.05	5.90	5.90
8.70	3.45	..			Do. Warr. B	435	5.05	5.50	5.05	5.05
26	20	1.50		6.8	Cdn. Bronze	115	22	22	22	22
90	90	5.00		6.3	Do. Pref.	nil	..	..	..	A89
16⅜	13	.75		5.8	Cdn. Canners A	460	13½	13¼	13	13
24⅛	18	$.85	+.15		Cdn. Celanese	2445	20	20¼	19⅝	20
33	27	1.75		6.3	Do. $1.75 Pref.	445	28½	28½	28	28
20	15½	1.00		6.1	Do. $1.00 pref.	nil	..	..	B16½	A17
9½	6½	..			Cdn. Chem. Ltd.	8955	7½	7¼	6¾	6¾
11.12½	4.35	..			Cdn. Collieries	68003	11	11	9½	10⅜
.85	.68	.05		0.7	Cdn. Cottons	17015	.80	.81	.74	.80
4.50	3.00	..			Cdn. Converters	nil	..	B4.00	A5.00	3.50
5	4½	..			Do. (B)	nil	..	B4	..	5
4.10	2.00	..			Cdn. Curtiss W.	2500	2.35	2.35	2.25	2.25
18	12	1.65			Cdn. Drawn Stl.	nil	..	B17	A18	18
13	10¾	.60	+1.10		Do. Pref.	125	11½	11½	11½	11½
22	14½	$†1.50		6.9	Cdn. Dredge	1705	15	15	14½	15
11½	10	.70		6.8	Cdn. Fairb. A	1135	10½	10¼	10	10¼
8⅝	6¾	.60		8.7	Do. (B)	1085	6¾	7	6¾	6⅞
125	105	..			Do. Pref.	nil	..	..	..	125
5.00	2.50	..			Cdn. Food Prod.	300	3.50	3.50	3.50	3.50
2	1½	..			Do. (A)	nil	..	B3	A11	8
62	41¼	6.00		11.9	Do. 4½% Pref.	80	52	51¼	50½	50½
1150	900	8.00	+14.00		Cdn. Gen. Elec.	nil	..	B780	A1180	900
38½	32	1.20	+*.15		Cdn. G. Inv.	525	32½	33	32	32½
19½	14⅜	1.75	+$		Cdn. G. Sec. A	75	15	14⅜	14¾	14¾
19½	16	1.75	+$		Do. (B)	nil	..	B16	A18	16
12½	7⅝				Cdn. Hydrocarb.	13950	12	12	11½	11¾
6	6	.10		1.4	Cdn. Ice Mach.	nil	..	B6	..	6
12¾	10	.80		6.7	Do. (A)	3450	11	12	11¾	12
20¼	15	.50		3.3	Cdn. Indust.	1968	16	16	15	15
80	73	3.75		5.0	Do. Pref.	5	75	75	75	75
48¼	35	1.00	+$.25		Cdn. Ingersoll R.	50	38	38	38	38
21	18⅞	*.50			Cdn. Int. I. Tr.	nil	..	B20½	A21	21
81	80	5.00		6.3	Do. Pref.	nil	..	B77½	..	†78¾
24	12¾	..			Cdn. Int. Pwr.	655	14	14	13¾	14
47¼	42½	3.00		7.1	Do. Pref.	171	43	43½	†42	†42
2.05	.75	..			Cdn. Kodiak	1000	1.40	1.25	1.20	1.20
7	14½	..			Cdn. Locomo.	10	17	..	16	7
8.25	5.00	..			Cdn. Marconi	325	5.00	5.37½	5.25	5.37½
30½	22½	.80		3.5	Cdn. Oil	2500	23	23¾	22½	22½
83	81	4.00		5.1	Do. 4% Pref.	nil	..	..	A78	†78
105	94	5.00		5.4	Do. 5% Pref.	nil	..	..	A102	†93
153	137	8.00		5.7	Do. 5% Pref.	nil	..	B130¾	A144	139½
31¾	23¾	1.50		6.0	Cdn. Pacific	14830	24⅜	25	24¼	24⅝
15½	11¼	..			Cdn. Petrofina Pfd.	1653	12½	13¾	†10½	†10½
8	6½	$.20			Cdn. Pr. & Pa. Sec.	181	6¾	6½	†5¾	†5¾
2.80	1.40	..			Cdn. Propane	900	2.45	2.45	2.45	2.45
45	30	..			Cdn. Salt	25	39	35	35	35
2.10	1.00	..			Cdn. Silk A	650	2.00	2.10	2.00	2.10
200	126	1.60	+2.10		Cdn. Tire	60	185	176	175	178
..	..	1.00		4.8	Do. Pref.	nil	..	..	..	A87
..	..	5.00		5.8	Cdn. Utilities Pf.	nil	..	..	A88	†85¾
79	74	4.25		6.1	Do. 4¼% Pf.	nil	..	B70	A72	†69½
24	14	.60		3.6	Cdn. Vickers	355	16½	16¾	16½	16¾
35	22	$1.25			Cdn. Wallpaper A	nil	..	B30	..	29
38	23	$1.25			Do. (B)	40	30	30	29½	29½
16	14	.80		5.8	Cdn.West.Gas 4½pf.	290	†14	14	†13¾	†13¾
21	19	1.10		5.7	Do. 5½% Pfd.	nil	..	B18¼	A19¼	19½
53	38½	1.00		2.4	Cdn. Westinghouse	60	42¼	42½	42¼	42¼
1.40	1.00	..			Canarama	nil	..	B1.00	A1.40	1.00
2.75	2.50	..			Do. Pref.	nil	..	B2.00	A2.75	2.50
.50	.50	..			Do. Warr.	nil	..	..	..	.50
12¾	10	1.32			Capital Estates	nil	..	B10¾	A10¾	10¾

D

	85	85	7.00		6.1	Dalex Co. Pref.	nil	..	..	A86
2.05	1.40	..			6.7	Dalfen's Ltd.	nil	..	B1.40	A1.50
48	44	3.00			6.7	David & Frere	nil	..	..	A48
		$5.00				De Havilland A	nil	..	B155	A299
35¼	29⅜	1.20	+1.50			Distill-Seagram	7899	29¾	29¾	29⅜
535	335	$10.00	+7.00			Dom. Ang. Inv.	nil	..	B535	..
93	93	5.00		5.4		Do. Pref.	nil	..	B93	..
24½	19¼	.80	+1.20			Dom. Bridge	3665	19½	20	19¼
140	14	4¼		4		Dom. Coal Pref.	140	14	4¼	4
22	17	1.00		5.9		Dom. Corset	nil	..	B17	A18½
13½	5½	.40		3.8		Dom. Dairies	450	11	10½	10½
25½	20½	1.75		8.0		Do. Pref.	nil	..	B24½	A26
15	7¾	$†1.10				Dom. Electro	599	8¼	8¾	8¾
32	31½	2.00		6.3		Dom. Engineer	225	4.50	4.75	4.60
21	15¾	1.00		5.7		Dom. Fabrics	nil	..	B17	A18
12	12	.60		6.0		Dom. 2nd Pref.	5	12	†10	†10
20	20	1.50		7.7		Dom. Fdry.	nil	..	B20	A22½
52¾	41¾	*.35		..		Dom. Glass	5417	46¾	47	46
101¼	97	4.50		4.6		Do. 4½% Pf.	205	98	98¼	98
98	82½	*.55	+2.60			Dom. Glass	1805	88	87½	82½
15⅜	13½	.70		5.3		Do. Pref.	405	14	.70	13¾
300	225	8.00		3.2		Dom. Insur.	nil	..	..	A310
12	6⅝	..				Dom. Magnes.	295	..	..	..
47	37	2.00	+2.00			Dom. Oilcloth	2180	†35	38¾	37¼
42	32	.80	+2.20			Dom. Oil. Univ.	220	32	33	33
48	40	2.50		6.4		Dom. Pref.	nil	..	B41¾	A44
22⅞	13⅞	*.10				Dom. St. & Co.	2018	15¼	15⅞	15
92½	45	1.25		2.7		Dom. Stores	4215	46¾	46½	45
20	13¼	.60		4.2		Dom. Tar & Ch.	11052	14	14½	14
18	11	1.00		6.3		Do. Pref.	452	11½	11¾	11¾
12	9¼	.60		6.3		Dom. Textile	4829	9⅞	9¾	9½
132	110	7.00		6.4		Do. Pref.	nil	..	B112	A131
19	14¼	.60	+*.15			Donohue Bros.	225	15½	15½	15½
14	10½	*.60	+$			Dover Indus. Ltd.	225	13¼	13	†12½
54	52½	*.65	+.25			Do. Pfd.	243	9	9	9
80	73½	3.75		5.0		Do. Pfd.	25	75	74½	74½
8¾	6⅝	.53		7.9		Dupuis Fre. A	825	7⅞	7	7

E

	8½	..		..		East Koot Pr.	nil	..	B8½	A10
115¼	115	7.00		6.1		Do Pref.	5	115	115	115
†80	†80	4.00	+1.50			East Baker 4% Pf.	nil	..	..	..
17¼	15⅞	1.00		5.9		Easy Wash. 5% Pf.	nil	..	B17	A18
40½	37	1.20	+1.40			Economic Inv.	200	37	37½	37
31	26½	1.50		5.7		Eddy Match	200	27	27	26½
72	53⅜	1.50		2.6		Eddy Paper	173	62	62¼	58
72	53	1.00		1.6		Do. (A)	10	62	61¼	61¼
3.25	2.75	.16	+1.04			Edmon. Concr.	nil	..	B2.90	A3.00
						Electra Invest.	nil	..	B.90	..
21	14	*1.20				Electrolux	550	18¼	18½	18½
15	11½	.50		4.3		Emco Ltd.	1360	12	11¾	11¼
58	52	*1.00				Empire Life	10	56	58	56
10	5	*.12½				Enam. & Heat. A	60	10	9	9
6.75	1.30	..				Do. (B)	60	5½	5	5
54	52½	*.65	+.25			Equitable Life	nil	..	B55	A60
6	6	.60		9.1		Erie Flr & Wood A	nil	..	..	A15½
1.00	1.00	..				Do. (B)	nil	..	B1.00	A2.50

F

25¼	18¾	1.50		7.9		Fam. Players	2865	19½	19½	19¼
15¼	14¾	1.00				Fanny Farm	880	16½	16¾	16½
45	30	$2.00	+1.00			Fed. Fire 25% Pd.	nil	..	B36	..
51	39	1.40	+*.25			Federal Grain A	60	47	46	46
29	27	1.40		5.1		Do. Pref.	105	27½	27½	27
		.90				Feralco	nil	..	..	A1.00
5.00	4.00					Fibre Products	nil	..	B7.00	A7.50
7	5					Do. Pref.	nil	..	B6½	..
9½	8½	.80		8.9		Finlayson A	nil	..	B8½	A9½
11¼	9⅜	$.65				Do. (B)	170	10¼	10½	10½
8½	5½					Fittings	nil	..	B7½	A8⅜
11	8½	.60		6.3		Do. (A)	100	9¼	9¼	9¼
1.50	1.60					Fleet Mfg.	1100	.70	.66	.60
88½	50	2.40	+1.60			Ford Mot. (U. S.)	1562	†75½	75½	74
190	108	5.00		3.1		Ford (Can.) A	250	166	166½	162
4	2½	..				For. Pr. Sec.	300	3½	2½	2½
17	10⅝	.50		4.5		Foundation Co.	1430	10¾	11	10½
35	25½	1.20	+1.30			Fraser Cos.	1572	27½	..	26
40	25	1.00	+1.50			Freiman	nil	..	B32½	..
97	90	4.50		4.8		Do. Pref.	nil	..

Mining Stocks

WEEK ENDED FEBRUARY 12, 1960

1959-60 Range High	Low	Company & Dividend ($)	♦Sales	Feb. 5 Last	Feb. 12 Week Ending High	Low	Close or latest
.45	.22	Abacus	155215	.29	.34	.27	.34
.15½	.06½	Acadia Ur. .	3500	.10	.10	.09	.10
.10	.04	Ad Astra ..	nil	..	B.04	A.05	.06
3.80	2.40	Advocate ...	8525	2.75	2.75	2.65	2.70
.42	.11	Agassiz	nil	..	B.10	..	.11
.76	.50	Agnico *.06	7535	.70	.70	.66	.67
.58	.36	Akaitcho ...	6000	.42	.44	.41	.43
.15	.05	Alba	4342	.06	.07	.06½	.07
17.00	10.00	Algom ‡▲▲2.50	1230	12.25	12.25	11.75	12.00
.40	.09	Alscope	8500	.16	.16	.15	.15
.45	.19	Amal. Lard .	1500	.23	.23	.22	.22
.18	.06	Amal. R.M. .	6500	.08	.08	.08	.08
.06	.03½	Amer'm.	nil	..	B.03½	A.04	.03½
.91	.56	Am.-Neph. .	3000	.58	.60	.58	.58
.10	.06	Am. Stand. .	5175	.08	.07½	.06	.07½
1.18	.52	Anacon	60863	.79	.83	.73	.77
14.00	12.00	Anglo-Hur. .50	609	12.25	12.12½	†11.25	†11.25
.45	.18½	Anglo-Rou .	1000	.22	.24	.24	.24
.52	.13	Ansil	60300	.23	.27	.23	.27
.15	.05	Anthonian .	7500	.08½	.08	.08	.08
.10	.02	Arcadia warr	2500	.05	.05	.05	.05
1.50	.75	Area	8500	.86	.86	.80	.85
.19	.07	Arjon	3000	.08½	.08½	.08	.08
.10	.04	Arno	10000	.06½	.06½	.06	.06½
.62	.45	Assoc. Ar'dia	15710	.51	.51	.47	.49
2.70	1.45	At. Coast Cop.	3400	1.99	2.00	1.90	1.90
.15	.04	Atlas Sulp. .	2167	.07½	.08	†.05	.08
.15	.06½	Atlas Y'fe .	nil	..	B.07½	A.09	.07½
.23	.10	Atlin-Ruff .	5832	.12	.12	.10½	.10½
.85	.25	Augustus ...	8546	.36	.33	†.20	.29
.21½	.08	Aumacho ...	12300	.09	.10	.09½	.09½
.19	.05	Aumaque ..	252600	.15½	.17	.11	.11½
3.15	2.50	Aunor .16 ...	2866	2.71	2.80	2.71	2.75
		B					
.33	.11	Baker Talc .	3100	.17	.20	.16	.20
.08	.03	Band Ore ..	nil	..	B.05	A.07	.05
.26	.16	Bankeno ...	3806	.19	.19	.19	.19
.10	.08	Bankfield ..	6000	.08	.08	.08	.08
1.94	1.24	Barnat	11975	1.51	1.51	1.48	1.50
.10	.04	Barvallee ...	nil	..	B.04½	A.05	.04½
.72	.51	Barymin ‡.03	1000	.51	.51	.51	.51
.26	.10	Base Metals .	5100	.15	.15½	.14	.15½
.25	.10	Baska	20000	.10½	.11	.10½	.10½
1.30	.20	Bateman ...	51400	.35	.33	.30	.30
.10	.03½	Beatrice	1000	.04	.04½	.04½	.04½
.36	.10	B'tie-Duq. .	2857	.20	.20	.20	.20
.85	.43	Beauce Placer	2000	.45	.45	.43	.43
.25½	.08½	Beaver L'ge .	22000	.14	.14	.11½	.13½
1.32	.61	Belcher	14650	.70	.68	.66	.66
.84	.40	Bellechase ..	9300	.46	.48	.43	.47
.13	.04½	Bell-Chib. ..	500	.05	.05	.05	.05
2.41	.12	Belleterre ..	2500	.33	.34	.33	.34
2.05	.57	Bethle'm ...	78670	.90	.93	.80	.80
.26	.13	Bevcon	3614	.17	.17	.16	.16
.27½	.07	Bibis-Yuk ..	9900	.11	.11	.10	.10
1.08	.51	Bicroft	13776	.64	.65	.62	.64
.24	.09½	Bidcop	9020	.10	.10	.09½	.09½
.30	.08	Black Bay .	33500	.18½	.22	.16½	.19½
.10	.05	Bordulac ...	2000	.06½	.06½	.06½	.06½
.15	.05	Bornite	1000	.05	.06	.06	.06
.79	.45	Bouzan	27800	.58	.59	.55	.56
.15½	.07	Boymar	14000	.07	.07½	.07	.07
8.55	4.90	Bralorne-P. 40	3379	5.45	5.50	5.25	5.40
.60	.41	Broulan	10263	.45	.46	.45	.45
5.40	2.25	Brunswick ..	43085	4.95	5.30	4.60	5.00
.39	.08	Buffadison .	30000	.10	.11	.09½	.10
2.55	1.30	Buffalo Ank.	9766	2.05	2.13	2.05	2.10
.09	.05½	Buff. R. L. .	2900	.07	.07	.06½	.06½
4.65	3.30	Bulolo ‡.45 .	1317	4.55	4.50	4.40	4.40
.11	.06½	Bunker Hill	6500	.07½	.09½	.08½	.08½
.42	.08	Burnt Hill .	22000	.21	.23	.20	.20
.40	.06½	Burrex	2000	.09	.09	.09	.09
		C					
.26½	.10	Cable	6166	.15	.15	.14	.14
.46	.11	Cadamet ...	6200	.14	.14	.12½	.12½
.07	.02½	Calumet	3500	.04	.04½	.04	.04½
10.50	5.70	Camp Chib.	16202	6.05	6.15	5.80	5.85
		Campbell R.L.					
13.25	10.00	.35+*.05 ..	1650	12.50	12.75	12.50	12.62½
		Canadian					
.13	.06	Cdn. Ast. .	16599	.07	.08	.06½	.06½
.75	.20	Cdn. Dyno.	16230	.41	.44	.35	.44
.84	.30	Cdn. Mal ..	33960	.54	.57	.53	.56
.40	.15	Cdn. N Inca	360701	.21	.20	.15	.15½
1.12	.29	Cdn. N'west.	28416	.36	.37	.30	.32
.09	.05	Cdn. Thor .	5500	.05½	.05½	.05	.05
.10	.03½	Canalask ...	1251	.05	.08	†.03	.05
.30	.10½	Canam	51724	.12	.15	.13	.14
.26	.10½	Candore	7000	.16	.15½	.15	.15
2.46	.35	Can-Erin ...	294848	.98	1.06	.90	.96
1.07	.08	Can-Met ...	553001	.12	.12	.08	.10
.55	.01	Do. warr. .	17800	.02½	.02	.01	.01
.60	.13	Canorama .	60205	.56	.60	.54	.58
.14	.03	Canuba	2900	.05	.05	.04	.04
.07	.04½	Canusa	2500	.05	.05	.05	.05
.15	.06	Captain	6900	.08	.08	.07½	.07½
.26	.07	Carbec	nil	..	B.08	A.09	.08½
1.77	.78	Cariboo	12600	1.05	1.10	1.04	1.08
.65	.14	Cartier Q. .	16720	.20	.20	.19	.20
		Cassiar Asb.					
13.75	9.40	.40+*.10 ..	4985	13.25	13.25	13.00	13.00
3.10	.35	Cayzor	4700	.49	.49	.45	.47
.10	.03	Cen. Man. .	400	.05½	.06	.06	.06
2.30	.99	Cen. Pat. ..	4500	1.31	1.32	1.24	1.25
.25	.09	Cen. Porc. .	8000	.14½	.14	.13	.13
2.75	1.87	Chemalloy ..	43734	2.65	2.75	2.60	2.75
.08½	.03	Cheskirk ...	5700	.04½	.04½	.04½	.04½
.21	.06	Chess	3200	.07	.06	.06	.06
.55	.19	Chesterville.	35200	.38	.39	.37	.37
.28	.14	Chib. Cop. .	6500	.16½	.16	.14	.14
.79	.43	Chib. Jac. .	18232	.48	.48	.45	.46
.27½	.12½	Chib. K'rand	3000	.13	.13	.13	.13
1.65	.60	Chib. Min. .	2000	.65	.65	.62	.62
.89	.45	Chimo	6000	.54	.54	.52	.52
.12	.05	Chipman	1000	.05½	.05½	.05½	.05½
4.45	2.30	Chromium ..	5130	4.05	4.45	4.05	4.40
.22	.05½	Cleveland ..	10000	.07½	.08	.07	.07½
4.10	2.80	Cochen'r ‡.12	9637	3.10	3.25	3.00	3.20
.21	.08	Cody-Reco .	4100	.10½	.10½	.09	.09
.19	.12½	Coin Lake ..	6000	.13½	.15	.13½	.15
.42	.35	Coleman A .	nil	..	B.30	..	†.36
.42	.32	Do. B	1500	.36	.32	.32	.32
.50	.25	Comb. Met. .	2000	.33½	.32	.31	.31
.18	.07	Cominga	nil	..	B.07	A.09	.07
.75	.43	Coniagas	9100	.54	.60	.53	.53
.70	.27	Coniaurum .	2700	.43	.45½	.45	.45
.35	.19	Con-Key	nil	..	B.21	A.23	.20
.15	.05	Cons. B'keno	2000	.06	.06	.06	.06
.20	.05	C. Beta	23433	.09½	.10½	.09½	.09½
.21	.06	C. Bi-Ore ...	nil	..	B.06½	A.08	.08
.19	.07	C. Callinan .	7762	.11	.08½	.08	.08½
.08	.04	C. C. Cad. .	1000	†.03	.05	.04	.05
		C. Denison					
16.12½	9.65	‡▲▲1.00	15795	10.62½	10.87½	10.50	10.75
4.20	.05½	Do. warr. .	65777	.05½	.08	.05½	.05½
4.15	3.50	C. Disc'y ‡.24	12640	3.60	3.75	3.65	3.65
.63	.23½	C. Fenimore.	22966	.32	.32	.28	.28
.10½	.06½	C. Gillies ..	1000	.07	.07	.07	.07
.37	.19	C. Gold. Arr.	6000	.27	.30	.27	.29
1.05	.51	C. Hall'well.	39852	.59	.62	.58	.60
4.50	2.50	C. Howey ..	1134	2.80	2.75	2.50	2.55
.64	.34	C. Marbenor.	10100	.33	.32	.29	.30
1.15	.46	C. Marcus ..	1600	.58	.63	.59	.63
2.55	1.01	C. Mogul ...	8040	1.15	1.24	1.12	1.18
.11	.07½	C. Monpas .	500	.08	.08	.08	.08
.44	.18	C. Morrison .	5000	.24	.24	.21	.24
1.20	.63	C. Mosher ..	12595	1.06	1.11	1.03	1.11
.36	.13	C. Negus ...	5399	.16½	.18	.16	.18
3.45	2.10	C. New Pac.	400	3.25	2.55	2.10	2.10
.08	.04	C. Nich.	nil	..	B.05	A.06	.05
1.24	.24½	C. Northland	12400	.38	.41	.37	.37
.20	.09	C. Pershcourt	nil	..	B.11	A.12	.10
.45	.24	C. Que. G. .	nil	..	B.30½	A.35	.30
.10½	.04½	C. Que. Y. .	500	†.02	.06½	.06½	.06½
.13½	.05	C. Red Pop..	16000	.07½	.08	.07	.07
.25	.08	C. Regcourt .	12520	.08	.10	.08	.09
.14	.05	C. San'rm ..	7500	.06	.06	.06	.06
22.62½	17.37½	C. Smelt. .80	11326	18.50	19.00	18.12½	18.50
1.10	.36	C. Sud'ry ..	18149	.40	.40	.36	.37
.47	.30	Cont. Con. M.	833	.30	.30	†.27	.30
.67	.32	Cont. Potash	3700	.40	.45	.39½	.40
5.25	3.50	Conwest *▲▲.06	2010	3.90	4.00	3.85	3.85
.74	.21	Copper Corp.	6500	.26	.27	.25½	.25½
.16½	.08	Copper Man.	37087	.12	.10½	.10	.10
2.50	1.58	Cop-Rand ..	19292	1.60	1.65	1.58	1.62
.58	.26	Coulee	6700	.28	.30	.29	.29
.12	.07½	Cournor	1000	.09	.09	.09	.09
1.30	.55	Cowichan ...	20500	.60	.60	.55	.55
5.15	2.65	Craigmont ..	7900	3.65	3.80	3.60	3.70
.12	.08	Crestaurum .	nil	..	B.10	A.12	.10
.13	.06	Croinor	6000	.08	.08	.07½	.08
.19	.08	Crowpat	3500	.08½	.09	.09	.09
.18	.06	Cusco	16000	.06½	.06½	.06	.06
		D, E, F					
.40	.15	Daering	10875	.16	.17	.15½	.15½
.74	.23	D'Aragon ...	8300	.29	.30	.28	.28
.34	.10	Decoursey B.	1500	.13	.13	.12	.13
.27	.15	Deer Horn .	21900	.24	.24	.21½	.23
.19½	.09½	D'Eldona ...	26333	.12½	.15	.11	.13
.74	.43	Delnite	1000	.54	.50	.50	.50
.12	.08	Dickstone C..	nil	..	B.09	A.15	.09
.17	.06	Dolsan	3000	.09½	.09½	.09	.09½
21.12½	15.75	Dome .70 ..	1700	18.75	18.87½	18.50	18.62½
.15	.07	Donalda	33900	.09½	.10	.08½	.09
.46	.11	Duvan	8200	.16	.15½	.15	.15
.15	.05	Duvex	500	.06	.07	.07	.07
.16	.06½	East Amph. .	4422	.09	.08	.07	.07
2.15	1.25	East Mal. ..	58700	1.65	1.65	1.53	1.53
2.75	1.41	East Sull. ..	20316	1.58	1.60	1.50	1.58
2.13	.80	Elder	19800	1.40	1.40	1.35	1.40
.50	.20	Eldrich	25260	.23	.23	.20	.22
.14	.06½	El Sol	23700	.07½	.07½	.07	.07
.45	.15	Eureka	8700	.22	.21	.19	.21
.15½	.05	Explor. All..	45300	.06½	.07	.06	.06½
.23	.09	Fab. Met. ..	72200	.14	.15	.13	.13½
		Falconbridge					
33.87½	24.37½	1.20	13261	30.50	30.50	29.12½	30.50
.09½	.03½	Fano	5000	.04½	.04½	.04	.04
1.12	.58	Faraday	2800	.76	.79	.76	.77
.19½	.09	Farw't M. ..	25635	.09½	.10	.09	.09
2.12	.34	Fatima	55650	.64	.65	.52	.54
.01	.00½	Flin Flon ..	1000	.00½	.00½	.00½	.00½
.07½	.03	Fontana '45 .	nil	..	B.04	A.04½	.04
.50	.38	Forty-Four .	nil	..	B.50	..	.50
.02	.02	Do. rts.	nil	..	..	..	.02
.11½	.05	Francoeur ...	4000	.06	.06	.05½	.05½
.09½	.04	Friday	1500	.04	.04	.04	.04
2.75	1.61	Frobisher ...	7835	1.90	1.90	1.82	1.85
85.00	75.00	Do. 4% deb.	60	84.00	84.00	83.00	84.00
.22	.05	Fundy Bay .	6500	.09	.09	.08½	.09
		G, H					
.07¼	.04½	Gaitwin	12500	.05	.06	.05	.05
26.50	20.50	Gaspe Cop. .	105	22.00	22.00	22.00	22.00
24.50	15.87½	Geco	4154	16.50	17.37½	16.25	17.37½
.20	.10	Genex	500	.12½	.12	.12	.12
1.55	.70	Geo-Scient.	500	1.05	.85	.85	.85
.33	.09	Giant Mas. .	252258	.17	.26½	.15	.25
12.25	6.25	Giant Yk. .40	7247	10.75	12.25	10.50	12.25
.59	.20	Glacier	7850	.31	.32	.28	.28
.14	.07	Glenn Ur. ..	2700	.07½	.07½	.07½	.07½
.25	.15	Goldale	1500	.18	.16½	.16	.16
.02	.00½	Gold Lake ..	nil	..	B.01	A.03	.01¼
.80	.33	Gold. Age ..	22800	.49	.50	.37	.45
.46½	.22	Goldfields ..	30900	.28	.27	.25	.26
.30	.18½	Goldray	8176	.26	.25	.24	.25
9.00	6.00	Granby	50	6.25	7.00	7.00	7.00
.38	.14	Grandroy ...	2130	.16	.16	.15	.15
2.25	1.00	Granduc	3100	1.12	1.25	1.15	1.20
.29	.15	Grandview ..	nil	..	B.13	A.18	†.14
.01	.01	Great Falls .	nil	..	B.00½	..	.01
.20	.03	Greyhawk ...	36950	.03	.03	.03	.03
.21	.05½	Gui-Por Ur. .	nil	..	B.07	A.10	.08
.15	.05	Gulch	10175	.07	.07½	.06½	.06½
.11	.05½	Gulf Lead ..	3800	.06½	.06½	.06	.06½
19.00	9.00	Gunnr G. 1.50	14165	10.50	10.62½	10.12½	10.37½
7.50	.30	Do. warr. .	25382	.43	.45	.30	.35
.10½	.04	Gwillim L. .	8500	.06½	.06½	.06	.06½
.10	.03	Haitian	101260	.05½	.05½	.05½	.06
5.70	3.00	Hallnor .16 .	100	2.10	2.05	2.05	2.05
.14	.10	Hard Rock .	8012	.10	.10½	.10	.10
.25	.08	Harr. Min. .	4000	.09½	.10	.09½	.09½
.25	.15	Hasaga	1000	.17	.15½	.15½	.15½
.25½	.08	H'd of Lakes	169300	.12	.13	.08	.08½
.58	.23½	Headway ...	11200	.27	.26½	.25	.25
.11	.04½	Heath	7600	.06	.06½	.06	.06½
1.95	1.35	High.-Bell ..	2200	1.55	1.55	1.50	1.50
		Hollinger					
35.50	25.75	24+‡.35 ..	4950	25.75	26.25	25.75	26.00
5.25	3.25	Hoyle	618	3.50	3.30	3.25	3.25
64.00	47.50	Hud. Bay 3.00	3830	50.00	50.25	49.25	49.50
.20	.08	Hugh-Pam .	1500	.10½	.10	.09	.09
.50	.30	Hydra Ex ..	9275	.42	.39	.38	.38
		I, J, K, L					
.73	.32	Inspiration .	6300	.41	.42	.36	.37½
.28	.07	Int. Ceramic.	2000	.10	.10	.10	.10
		Int. Nickel					
106.00	83.00	†▲.75+‡▲.40	9775	100.75	103.00	99.00	102.75
.41½	.08	Int. Molybd'm	12500	.10½	.11	.10½	.10½
4.35	1.50	Irish Cop. ..	22350	1.71	1.75	1.65	1.70
3.25	1.60	Iron Bay ...	1700	2.38	2.36	2.35	2.35
.82	.30	Iso M.	12000	.45	.44	.42	.44
.67	.10	Jack Waite .	48140	.36	.38	.30	.33
3.15	1.07	Jacobus	10300	1.24	1.25	1.15	1.22
.64	.20	Jaye	7325	.23	.23	.22	.22
.21	.07	Jellicoe	22093	.10½	.11	.09½	.09½
.34	.09	Joburke	2000	.12½	.11	.11	.11
.45	.21	Joliet Que. .	4600	.27	.26	.25½	.25½
.26½	.12	Jonsmith ...	16000	.15	.15	.13	.14
.72	.35	R. J. Jowsey	9640	.38½	.40	.36½	.38
.14	.04½	Kenville	3500	.06½	.07	.07	.07
21.50	18.25	K.-Addison .80	7871	20.87½	21.00	20.75	20.87½
4.10	2.35	Kilembe	6600	3.45	3.45	3.30	3.40
2.17	.61	Do. warr. C	12894	1.29	1.28	1.18	1.26
.86	.32	Kirk. Min. .	1800	.34	.36	.33	.33
.15½	.09	Kirk. Town..	500	.09½	.09½	.09½	.09½
.10	.05	Kontiki Ld..	5000	.05	.05	.05	.05
.02	.01	Koot. Base ..	nil	..	..	A.02	.01
31.25	23.00	Labrador ‡.25	6676	23.50	24.00	23.00	23.25
1.47	.60	Lake Cinch .	1000	.62	.63	.63	.63
1.50	.60	L. Dufault .	9200	.78	.76	.73	.73
.11½	.06	L. Lingman .	7500	.10	.09	.07	.07½
.34	.15	L. Osu	3750	.16	.18	.16	.18
5.80	4.00	L. Shore ...	255	4.15	4.20	4.05	4.05
.38	.26	L. Wasa ...	4100	.31	.30	.30	.30
6.00	3.50	La Luz	nil	..	B4.05	A4.20	4.00
4.75	2.61	Lamaque .20	15000	3.95	4.05	3.70	4.00
1.00	.78	Langis Sil. .	25700	.97	.95	.78	.80
.35	.23	Latin Am. ..	1000	.30	.30	.30	.30
1.61	1.10	Leitch G. .06	10700	1.40	1.41	1.36	1.41
.17	.06	Lencourt ...	4000	.07	.08	.07	.07½
.06½	.03	Lexindin ...	7400	.03	.03½	.03	.03
.07	.03	Lingside	5000	.06	.05½	.04½	.04½
.20	.08	Lithium	2000	.15	.15	.15	.15
2.48	1.61	Little L.L. .	6900	1.77	1.85	1.75	1.85
.46	.14	Lorado Ur. .	18000	.27	.29	.26	.28
.23	.05	Do. warr. .	4275	.06½	.07	.05½	.06
.12	.04	Louvicourt .	1000	.06	.05½	.05½	.05½
.40	.11	Lyndhurst ..	14400	.16½	.17	.16	.16
.22½	.06	Lynx Yk. ..	22700	.10½	.10	.06	.08
		M					
		Macassa					
3.10	2.66	.12+‡.03 ..	11390	2.70	2.75	2.66	2.70
.55	.25	MacDonald .	15800	.29	.27	.26	.26
.16	.04½	Macfie	28950	.06½	.07	.05½	.06
1.47	1.00	Macleod	2480	1.00	1.02	1.00	1.02
		Madsen R.L.					
3.45	2.55	.10+‡.10 ..	10825	2.90	2.95	2.86	2.90
.17	.06	Magnet	1000	.08	.07½	.07½	.07½
.06	.02	Majortrans .	5500	.02½	.03	.02½	.02½
1.25	.90	Malartic	4024	.95	.94	.90	.90
.11	.04	Maneast Ur. .	nil	..	B.06	A.07½	.05½
1.40	.65	Manitou-B. .	nil	..	B.68	A.80	.70
.42½	.13	Maralgo	11400	.15	.16	.15	.15
.17	.06	Marcon	16750	.11½	.10½	.09½	.10
2.05	.98	Maritimes ..	55175	1.20	1.24	1.12	1.14
.47	.25½	Martin McN.	55700	.34	.36	.34	.35
.32	.12	Massval	14050	.14½	.32	.15	.32
.22	.08	Matachewan.	13000	.10	.09½	.08½	.08½
.28	.10	Maybrun	5700	.11	.11	.11	.11
31.62½	26.00	McIntyre *.25	2526	26.75	27.00	26.00	26.00
.48	.24	McK. R.L. ..	17105	.25	.26	.24	.24½
.12½	.07	McMarmac .	6712	.08	.07	.07	.07
.45	.25	McWatters ..	60700	.38	.42	.37½	.41½
.25	.10½	Mentor Exp..	35600	.18	.18	.17	.17
1.90	.88	Merrill Is. ..	23600	1.01	1.00	†.78	.93
.13	.07	Meta Ur. ...	16000	.10	.10	.08	.09
.55	.24	Mid-Chib. ...	3200	.25	.25	.25	.25
1.00	.50	Midrim	4933	.68	.67	.60	.60
.23	.12	Midwest	11500	.15	.15	.13	.15
2.90	.67	Milliken L. .	30495	.93	.95	.88	.92
.09	.04	Mindamar ...	nil	..	B.06	A.07	.06
16.37½	12.00	Mng. Corp. ‡.06	965	12.12½	12.12½	12.00	12.12½
.27	.06	Min. Ore ...	5000	.08	.09	.08	.09
.21	.08	Mogador	500	.11	.12	.12	.12
1.72	.72	Molyb'nite .	500	.95	.85	.85	.85
1.25	.60	Moneta	15600	.75	.76	.73	.74
.30	.13	Monpre	3000	.23	.24	.22½	.24
1.04	.50	Mt. Wt. Iron	56716	.54	.52	.50	.50
.68	.38	Multi-Min. ..	5800	.42	.42	.40	.40
		N					
.39	.15	Nama Cr. ..	8300	.18	.18	.16	.16
.14	.05	Nat. Ex.	5000	.07	.08	.08	.08
.20	.05	Nealon	5000	.07	.07½	.07	.07
.16	.12	Nello Min. .	500	.12	.12	.12	.12
.37	.11	Nesbitt L. ..	2700	.13½	.12½	.12½	.12½
.06½	.03	N. Ainsworth	4000	.06	.06½	.06	.06
.12	.05	N. Alger	6500	.06½	.06½	.06	.06
.69	.24	N. Athona ..	5700	.31	.33	.30	.30
.18	.05	N. Bidl'e ...	226500	.18	.18	.15	.15
.43	.24	N. Calmt ‡.02	79350	.33	.40	.31	.36
.08	.05	N. Cronin ...	nil	..	B.07	..	.07
.38	.12	N. Delhi	6000	.14	.16	.13½	.14
		N. Dick'n					
2.90	2.20	.10+‡.02½.	77455	2.54	2.90	2.49	2.85
1.15	.74	N. Far North	nil	..	..	A.25	.74
.36½	.07	N. Formaque	16000	.17	.17	.15	.16
.11½	.05	N. G'dvue ..	9541	.06	.06½	.06	.06½
.17	.03	N. Hamil ...	4445	.04	.05	.03	.05
.19	.08	N. Har'na ..	19300	.14	.16	.12	.14
1.53	.61	N. Hosco ...	34025	.89	.87	.82	.82
.10	.05½	N. Imperial .	nil	..	B.06	A.08½	.06
.05½	.03	N. Indian ...	2500	.05½	.05	.05	.05
.12	.04	N. Jack Lake	3100	.04	.06	.05	.05½
.12	.06½	N. Jason ...	5066	.06½	.08½	.07	.07
.27½	.06½	N. Kelore ...	21300	.11½	.12	.10	.11
.41	.14	Newlund ...	19940	.21	.22	.19	.22
.55	.30	N. Man.	4100	.34	.34	.32	.32
2.71	.68	N. M'l'que .	233296	.81	.86	.75	.78
.09½	.04½	Newnorth ...	nil	..	B.05	A.05½	.05
.26	.08	N. Rouyn ...	1000	.08	.08	.08	.08
.09½	.03½	N. Santiago .	14000	.05	.05	.04½	.05
.10	.04	N. Senator .	5320	.05½	.05	.05	.05
.20	.12½	N. Taku	1000	.16½	.16½	.16½	.16½
.07	.02½	N. Vinray ..	115000	.07	.09	.06½	.07½
1.15	.46	N.W. Amulet	7500	.75	.75	.73	.73
1.18	.48	Nickel M&S.	28432	.51	.53	.48	.48
1.20	.45	Nickel Rim .	1000	.55	.50	.50	.50
2.65	1.25	Nipissing ...	7520	1.32	1.35	1.26	1.26
.08½	.05	Nisto	6000	.05	.05½	.05½	.05½
.30	.06	Nocano	1300	.09	.07½	†.05	.07
.30	.15	Nor. Acme .	1101	.16	.16	.16	.16
58.00	42.50	Noranda	6088	43.12½	44.25	42.50	43.75
1.17	.80	Norbeau	14000	.94	.93	.85	.87
.13½	.04½	Norgold	2000	.05½	.05½	.05½	.05½
.43	.20	Norlartic	20000	.21	.21½	.21	.21½
4.50	3.00	Normetal *.05	5700	3.30	3.45	3.25	3.30
.27	.09	Norpax	7000	.11	.11	.11	.11
.22	.07	Norsym'e ...	7500	.09	.09½	.08½	.09½
.16	.06	N.A. Asb. ...	nil	..	B.07	A.08	†.05
1.95	.32	N. Am. R.M.	4600	.70	.70	.61	.70
1.45	.96	N. Coldstream	40180	1.15	1.15	1.04	1.10
.78	.37	Northgate ..	44130	.51	.55	.49	.55
.85	.21	N. Goldcrest.	16033	.30	.39	.26½	.26½
1.98	.92	N. Rankin ..	12726	1.00	1.05	.96	1.00
1.85	1.10	North Can. .	1720	1.10	1.15	1.10	1.10
2.55	.75	Northspan ..	30358	1.00	1.03	.93	1.00
1.80	.35	Do. warr. .	4370	.59	.59	.40	.48
.10	.03	N.W. Vent. .	nil	..	B.04	A.07	.05
.30	.10	Norvalie	5000	.13½	.13	.12½	.12½
2.00	.80	N. Beaucage.	nil	..	B.81	A1.00	.85
.23	.12	Nudulama ..	3000	.16	.14½	.14	.14
		O, P					
.20½	.10½	Obalski	44450	.13	.16	.13	.15
.14	.06	Obaska	1000	.07	.07	.07	.07
1.07	.57	O'Brien	5400	.66	.68	.66	.66
.17½	.10	Oka	nil	..	B.11	A.14	.16
.23	.11	O'Leary	12000	.14½	.14½	.13	.13
.39	.13½	Opemisca ...	13100	.17	.19½	.16	.16
12.37½	7.00	Opemiska ...	13290	7.35	7.50	7.10	7.25
1.88	.43	Orchan	210400	1.16	1.18	1.07	1.15
.13	.06	Orenada	8000	.07½	.07½	.07	.07
.65	.21	Ormsby	6150	.31	.35	.31	.35
.45	.26	Osisko	11800	.32½	.33	.32	.32
.22	.12	PCE Explor..	500	.15	.14	.14	.14
.85	.35	Pac. Nickel .	42250	.57	.73	.51	.72
.79	.50	Pamour P. ‡.04	4600	.61	.66	.63	.66
.14½	.06	Paramaque .	47000	.09½	.11	.09½	.09½
.56	.15	Pardee	7170	.20	.20	.18	.18½
.23	.09	Partridge ...	nil	..	B.09	A.10	.10
5.30	3.20	Patino	200	3.25	3.50	3.25	3.25
2.15	.50	Do. B warr.	2200	.60	.53	.50	.50
5.00	2.60	Pato Con. ‡.20	4727	2.75	2.85	2.65	2.70
.70	.25	Paudash	11600	.35	.45	.35	.45
.33	.18	Paymastr ‡.01	29412	.23	.23	.21	.21
.39½	.20	Peerless	29820	.31	.29	.23	.23
3.15	2.00	Pend Oreille	710	2.69	2.68	2.67	2.68
.64	.18	Pennbec	5500	.36	.35	.32	.33
.29	.13	Perron	6200	.18	.20	.18	.20
1.25	.85	Pickle Cr.‡▪	7367	.90	.95	†.75	.95
.12	.05½	Pitch Ore ...	4000	.06	.06	.06	.06
.06½	.03	Pitt G.	nil	..	B.03½	A.04	.04
12.62½	10.00	Placer .50 ..	545	11.25	11.37½	11.00	11.00
.12	.05	Porc. Prime.	15500	.07½	.07½	.06½	.06½
1.24	.58	Portage	259350	.86	.98	.86	.91
.47	.31	Powell R. ..	40350	.34	.42	.34	.40
8.35	4.40	Preston ‡1.00	3000	4.70	4.65	4.50	4.55
5.00	2.20	Pronto *.60 .	21732	3.00	3.05	2.93	2.94
1.10	.55	Prospectors .	1100	.60	.65	.63	.63
.12	.05	Purdex	7400	.06½	.06½	.06½	.06½
		Q, R					
.24	.12	Quatsino	3500	.17	.17	.16½	.17
.76	.14	Que. Ascot .	30091	.18	.18	.14	.17
.77	.21½	Que. Chib. .	19700	.24½	.24½	.23	.24
2.30	1.05	Que. Cobalt.	900	1.51	1.51	1.50	1.50
.47	.11	Que. Cop. ..	17400	.17	.17	.16	.16
.07½	.03½	Que. Lab. ...	1000	.05	.05	.05	.05
7.25	2.50	Que. Lith. ..	1735	2.90	2.85	2.75	2.75
.22	.10	Que. Man. ..	1000	.13½	.13½	.13½	.13½
.95	.45	Que. Met. ..	12320	.58	.57	.54	.54
.35	.14½	Que. Smelt..	1300	.16	.16	.16	.16
.04½	.01	Do. warr. ..	nil	..	B.01	A.04	.01
.33½	.11	Queenston C.	700	.14	.14	.14	.14
15.25	9.50	Quemont *.20	3154	10.37½	10.62½	10.12½	10.50
1.81	.44	Radiore	90950	.62	.71	.61	.67
.65	.18	Rainville	2500	.30	.25	.23	.23
.75	.24	Rayrock	80975	.51	.53	.48	.52
.65	.30	Realm	43800	.52	.52	.43	.44
.03	.00½	Red Cloud ..	nil	..	B.00½	A.01	.00½
.09	.03	Red Crest ..	6000	.04	.03½	.03½	.03½
.04	.01	Red Hawk ..	7000	.01½	.02	.01½	.02
		Reeves McD.					
1.70	1.05	‡.12½	nil	..	B1.50	A1.60	1.55
1.80	1.07	Renabie	1500	1.65	1.75	1.69	1.75
.50	.18	Rexspar	27800	.36	.34	.31	.33
.04	.00½	Rice Lake ..	9500	.01¼	.04	.02¼	.02¼
.13	.06½	Rio-Rup. ...	1500	.08	.08	.07	.07
		Rix-Athabasca					
.77	.17	‡▲▲.05	5800	.19	.19	.18¼	.19
.79	.23	Roberval ...	12225	.26½	.30	.23	.30
.24	.09	Roche M. ...	6560	.12	.12½	.11	.11
.54	.22	Rockwin	46285	.25	.24½	.22	.23½
.14½	.06	Rowan Cons.	2516	.08	.08	.08	.08
.13½	.09	Ryanor	nil	..	B.11	A.13	.11
		S					
6.50	3.25	St. Law. Riv.	5100	5.90	5.85	5.75	5.85
.82	.53	San Antonio.	4500	.58	.70	.65	.67
.16½	.06	Sand River .	3900	.09	.08	.08	.08
.80	.15½	Satellite	16768	.20	.20	.17	.17
....	....	Scotia Gold .	nil	..	..	A.00½	.01½
1.84	.70	Sheep Cr. *.03	46100	.75	.85	.75	.83
4.60	2.35	Sherritt G. .	16007	2.92	2.99	2.80	2.85
4.50	3.75	Sigma M. .20	100	4.25	4.05	4.05	4.05
.25	.05	Silbak Prem.	38064	.19	.22	.19	.22

Bid and Ask quotes of Toronto and Montreal exchanges up to press time are published on page 43

1959-60 Range High	Low	Company & Dividend ($)	♦Sales	Feb. 5 Last	Feb. 12 Week Ending High	Low	Close or latest
.85	.22½	Silver M. ...	1700	.33	.34	.32	.34
.19	.03	Silver R. ...	nil	..	B.05	A.07	.07
.48	.17	Silver Stand.	6750	.25	.28	.25	.28
1.09	.65	Siscoe ‡.04½.	22725	.94	.97	.92	.93
.07	.03	Skeena	2000	.04	.03½	.03½	.03½
.21	.08	Slocan Duv..	31860	.08½	.10	†.06	.10
.38	.05	South-Duf. .	875200	.27	.38	.22	.27
.19	.08	Stad'n '44 ..	43780	.10½	.10	.08	.09½
.18	.08	Standard G..	1000	.10	.08½	.08½	.08½
1.40	.29	Stanleigh ...	5460	.33	.36	.33	.36
.66	.05½	Do. warr. .	3760	.11	.11	.11	.11
2.00	.25	Stanrock ...	635	.39	.35½	.35½	.35½
.01	.00½	Star Lake ..	nil	..	B.01	....	.01
1.50	1.05	Star Land Ex.	nil	..	B1.45	A1.60	1.40
.09	.03½	Starrat O. ..	21900	.05	.05½	.05	.05
.08½	.04	Steeloy	nil	..	B.05	A.06	.05
15.37½	10.37½	Steep Rock .	17217	10.87½	11.00	10.75	10.75
.27	.12	Sturgeon R..	10200	.19	.20	.18	.20
.11	.05	Sudbury G. .	1000	.07½	.07	.07	.07
2.85	1.45	Sullivan	4365	1.65	1.73	1.65	1.69
.27	.14	Sunburst ...	6200	.20	.20	.18	.18
.19	.11	Sunshine ...	1000	.11	.11	.11	.11
1.25	.70	Sylvanite .06	12850	.79	.79	.70	.70
		T, U					
.25	.08	Tache Lake .	9000	.09	.10	.09	.10
.89	.58	Taurcanis ...	4900	.66	.66	.62	.62
.72	.47	Do. v.t.	6400	.56	.55	.55	.55
.26	.15	Taylor B. ..	nil	..	B.15	....	.15
.25	.09	Tazin	2000	.12	.11	.11	.11
2.90	1.60	T.-Hughes .10	41300	2.05	2.04	1.90	1.97
3.70	1.60	Temagami ..	6410	1.91	2.03	1.91	2.00
.55	.30	Territory	nil	..	....	....	.31
.99	.35	Thompson ..	10600	.62	.64	.60	.62
.14	.05	Tiara	3600	.05½	.05½	.05½	.05½
.36	.06½	Tib-Explor..	15000	.10	.14	.09½	.10
1.53	.22½	Tombill	7300	.50	.51	.48	.49
.45	.24	Torbrit S. ..	2000	.30	.29	.29	.29
.75	.09	Torwest	40000	.15	.15½	.12	.14
.14	.07	Towagmac ..	nil	..	B.07½	A.09½	.09½
1.30	.49	Tr. Can. Ex..	2500	.55	.55	.51	.51
.29	.14	Trans. Res. .	nil	..	B.16	A.18	.16
.09	.03½	Trebor	662	.05	.04	†.02	†.02
.60	.26	Tribag	2000	.28	.29	.29	.29
.30	.12	Trinity	3500	.14	.14	.13	.14
.23	.04	Trojan	25500	.09½	.09½	.08½	.09½
.24	.08	Ultra-Shaw..	5100	.10	.10	.10	.10
.23	.18	Union Min. .	2066	.21	.21	.21	.21
6.90	3.90	United Asb. .	2650	4.15	4.25	4.10	4.15
		United Keno.					
6.75	3.95	*.16+.04 ..	7425	5.70	6.00	5.70	5.95
.61	.16½	Un N. Fort..	31550	.22	.23½	†.20	.22
		Upper Can.					
1.44	.88	‡.02½	7100	1.16	1.18	1.15	1.15
.02	.00½	Utica	5000	.01	.01	.01	.01
		V, W					
.04½	.02	Van'da	3000	.02½	.02	.02	.02
.43	.11½	Vanguard ..	152650	.36	.43	.37	.43
34.00	21.00	Ventures .50.	4174	25.00	25.00	24.00	24.50
2.65	1.30	ViolaMac ...	10175	1.45	1.48	1.39	1.40
.29	.07	Virginia	1900	.10	.10	.07	.10
8.40	6.00	Waite A. .80	4559	6.50	6.90	6.35	6.65
.34	.04	Weedon M. .	15800	.06	.07½	.06	.06½
.07	.03	Wendell	2500	.04	.04	.03½	.04
.20½	.08½	Werner Lk. .	3500	.11	.11	.10	.10
.41	.09½	West Ex. ...	4000	.12	.12	.11	.11
.09	.04	West Mal. ..	5000	.05	.04½	.04½	.04½
.15	.04½	West Min. ..	4000	.07	.06	.06	.06
.30	.12½	West. Surf .	75431	.28	.28	.24	.28
.12	.04	Westville ...	nil	..	B.04	A.05½	.04½
2.60	1.08	Willroy	18800	1.38	1.43	1.36	1.37
1.85	.50	Do. warr. .	100	.80	.70	.70	.70
.22	.09	Wiltsey C. .	13500	.12½	.12½	.10½	.11
.11½	.06	Winchester .	2500	.06	.06	.06	.06
.19½	.10	Windfall	500	.14	.13	.13	.13
.03	.01½	Wpg. R. Tin.	nil	..	B.01¼	A.01½	.02
1.65	1.18	Wright-Har..	2660	1.30	1.31	1.25	1.25
		Y, Z					
.42	.16	Yale Lead ..	17550	.21	.22½	.20	.21½
.12	.06	Yellorex	16000	.08	.09	.07½	.07½
1.64	.98	Y'ke Bear ‡.02	31345	1.05	1.09	1.01	1.09
1.44	.67	H. G. Young	20200	.79	.82	.79	.80
.08	.03½	Yukeno	7000	.04½	.04½	.04	.04
.99	.60	Yukon-Con.‡▪	nil	..	B.65	A.69	.67
.40	.20	Zenmac	10700	.23½	.24	.23	.23
.35	.15	Zulapa	4500	.26½	.24	.23	.24

Oil Stocks

1959-60 Range High	Low	Company & Dividend ($)	♦Sales	Feb. 5 Last	Feb. 12 Week Ending High	Low	Close or latest
.27	.14	Acme	44700	.18	.21½	.19	.20
1.02	.56	Ajax	5200	.61	.68	.62	.68
.12½	.04½	Albedena ...	8000	.04½	.06	.05	.05
		Alta. P. Cons.					
.61	.38	*.02	20044	.38	.52	.41	.52
.16	.02¾	Aldina	14500	.04	.06	.04	.06
.65	.20	Allied Roxana	nil	..	B.26	A.36	.35
5.15	2.10	Alminex	2634	2.73	2.75	2.60	2.60
.05¾	.02¼	Amalta	nil	..	B.02	A.03	.02¼
.25	.09	Amer. Leduc	17000	.12	.12	.11	.11½
4.10	2.50	Amurex	nil	..	....	....	2.50
1.45	.70	Anaconda ...	50	†.26	†.20	†.20	†.20
.24	.11	Anchor	10900	.12	.13½	.13	.13
10.75	6.05	Anglo Am.*▪	50	7.60	7.25	7.25	7.25
2.09	.68	Asamera ...	3100	.68	.70	.69	.70
		B					
10.87½	6.30	Bailey-Sel. A	7100	6.70	7.10	6.55	7.00
25.25	17.62½	Do. 5% pf.	25	18.50	18.75	18.75	18.75
		Do. 5¾% pf.					
24.00	18.00	1.43¾	575	18.75	18.50	18.25	18.25
2.00	.96	Banff	10140	1.00	1.24	1.00	1.19
.05	.03	Barons	nil	..	B.03	A.03½	.03
.20	.03	Bashaw	5000	.05	.06	.06	.06
.09½	.04	Bata	12000	.05½	.06	.06	.06
.31	.10	Blue Crown.	46333	.28	.28¾	.23	.26
.85	.15	Bluewater ..	1000	.24	.24	.24	.24
.60	.17	Bonnyville ..	9725	.27	.27	.25	.26
1.00	.50	Bralsaman ..	nil	..	B.55	A.65	.75
3.30	1.85	Britalta	3600	2.30	2.35	2.25	2.32
		C					
1.27	.40	Calalta	9700	.46	.52	.47	.52
35.00	19.50	Calg. & Ed..	1860	20.25	20.12½	20.00	20.00
4.15	3.50	Calvan	600	3.50	3.50	3.50	3.50
.74	.45	Calvert	900	.58	.53	.53	.53
		Canada					
2.35	.99	Can. Oil L.	13875	1.10	1.27	1.15	1.20
1.05	.25	Do. warr. .	4100	†.20	.29½	.26	.26
		Can. So. Oil					
1.25	.45	warr.	500	.60	.58	.58	.58
5.25	2.85	Can. So. Pet.	10117	4.35	4.55	4.20	4.50
		Canadian					
1.69	.90	Cdn. Chieft'n	11000	1.15	1.16	1.03	1.15
6.05	3.20	Cdn. Dev. .	10790	3.30	3.30	3.20	3.30
2.90	2.01	Cdn. Exp. G.	22883	2.23	2.40	2.23	2.40
.10	.02	Cdn. F'tune	10000	.03¼	.03	.02	.03
.62	.23	Cdn. H. Cr..	5250	.34	.34	.33	.33
1.85	.70	Cdn. H'stead	55	.90	.90	.90	.90
14.75	7.45	Cdn. Husky	11450	7.55	7.85	7.45	7.60
8.50	3.10	Do. warr. .	720	3.25	3.60	3.40	3.40
12.12½	10.75	Cdn. Superior	690	10.87½	11.50	10.75	11.25
2.00	.62	Cdn. Wil'ston	nil	..	B.85	....	.82
.60	.43	Carleton	nil	..	....	....	.43
.25½	.07	Castle O. ...	2500	†.14	.14	.13½	.14
9.20	4.75	Cent. Del Rio	8867	5.25	5.30	5.05	5.25
.07	.01½	Century	5000	.01½	.02	.02	.02
1.90	1.02	Charter	5350	1.20	1.20	1.13	1.13
.25	.09½	Claybar	1500	.15	.15	.15	.15
....	....	Coastal ‡.04½	nil	..	....	....	†.60
.60	.30¼	Command ...	nil	..	B.55	A1.00	†.55
.41	.09	Commercial .	4000	.16	.16	.14¼	.15½
1.75	.75	Commoil ...	1200	1.50	1.50	1.50	1.50
4.00	2.00	Common P. .	nil	..	B2.25	A2.45	2.50
.10	.04	Cons. Allen..	6120	.06	.06	.05	.05
.47	.22	C. Dragon ..	12566	.30	.31	.27	.27
.53	.38	C. East C. .	500	.43	.43	.43	.43
5.25	2.45	C. Mic Mac .	5525	2.60	2.75	2.55	2.60
.07	.04	C. Peak	1000	.04½	.04½	.04½	.04½
5.85	3.25	C. W. Pet. .	1300	3.80	3.85	3.80	3.85
2.67	1.75	Cree O. warr.	19616	2.35	2.35	2.21	2.30
1.35	1.04	Crusade	700	1.23	1.20	1.20	1.20
		D, E, F					
.33	.15	Dalhousie ..	6500	.20	.20½	.19½	.19½
1.62	.80	Dev. Palmer.	22015	.82	.84	.80	.80
13.50	7.40	Dome	2470	7.40	7.75	7.50	7.55
3.20	1.10	Dom. Lease..	15400	1.30	1.40	1.30	1.35
.05	.02	Dom. Min'ls	2000	.02	.02	.02	.02
2.00	.85	Dynamic Pet.	28700	1.36	1.38	1.30	1.35
.12	.01½	East Cdn. ..	2500	.02	.03	.02	.03
.06¾	.02	Edoran	200	.02	.03	.03	.03
.10½	.04½	Emp Oil	1000	.06½	.06	.05½	.06
8.25	3.60	Fargo	14726	4.60	4.65	4.10	4.15
3.80	1.50	Ft. St. John	5300	1.50	1.60	1.50	1.55
9.00	4.75	French Pt. pf.	2100	5.25	5.30	5.10	5.10
.93	.27	Futurity	2500	.30	.30	.30	.30
		G, H					
.12	.04	Gaspe	2205	.06	.06	†.02	†.02
.08	.02	Gateway ...	1600	.02½	.03	.02	.02
1.50	1.00	Gen Pet. Dr.	200	1.05	1.05	1.05	1.05
1.40	.80	Do A	2885	.95	.80	.80	.80
.30	.01	Globe	nil	..	B.10	A.15	.10
.15	.03	Golden Sat..	nil	..	B.03½	....	.03
.05½	.03½	Golden Sp. .	3000	.04½	.04½	.04½	.04½
21.25	10.25	Gt. Plains ..	1410	10.50	11.00	10.25	11.00
4.80	1.78	Gridoil	300	2.05	1.78	1.78	1.78
11.00	6.75	Hi-Tower ...	125	7.75	8.00	7.50	7.50
21.00	10.12½	Home A ...	4069	10.75	10.75	10.25	10.25
20.75	9.75	Do. B	3569	9.85	10.25	9.80	10.12½
21.62½	10.87½	Hud. Bay O.	5153	12.37½	12.62½	12.00	12.62½
		I, J, K, L					
.22	.08	Israel Cont ..	nil	..	B.12	....	.12
.28	.14	Jump. Pound	500	.16½	.15	.15	.15
3.00	1.55	Jupiter	500	1.78	1.79	1.79	1.79
.05½	.02	Kenare	nil	..	B.02½	....	.02½
.35	.09	Keno	16700	.26	.29¾	.27	.28½
2.95	1.85	Landa	nil	..	B2.15	A2.75	2.20
.08	.04¾	Leamac	1000	.05	.05	.05	.05
.11	.04	Leduc Cal. .	11100	.07	.07½	.07	.07¼
.25	.09	Lloydminster	2000	.25	.25	.25	.25
.26	.06½	Long Is. P. .	20600	.14	.14	.12	.12½
.67	.35	Long Pt. G..	5900	.54	.53	.50	.50
		M, N					
.20	.09	Marigold ...	6000	.09	.10	.09½	.10
.03	.01	Marvel	2000	.03	.02	.02	.02
1.78	1.00	Mayfair	nil	..	B1.00	A1.90	1.00
3.35	1.80	Medallion ...	15672	2.02	2.00	1.91	1.91
.50	.18	Melton	nil	..	B.25	A.27	.27
.97	.36	Merit	4279	.53	.54	†.40	†.40
.30	.12	Merland	5620	.13½	.13	†.11	.12½
.93	.45	Midcon	12440	.52	.53	.50	.52
.36	.20	Mill City ...	3600	.24	.23	.20	.23
.29	.05	Mill Creek .	5700	.13	.12	.11½	.11½
.25	.09	Mollusca	nil	..	B.08	....	.09
.04	.01	Monarch	1000	.01¾	.02	.02	.02
4.60	2.10	Nat. Pet.	nil	..	B2.16	A2.40	2.46
.22	.04	N. Concord .	nil	..	B.06	A.09	.08
.73	.21	N. Cont. ...	3400	.28	.28	.25	.25
.36	.13	N. Davies ..	5000	.16	.15	.15	.15
.06½	.03	N. Richfield.	1000	.04¼	.04¼	.04	.04
.09	.03	N. Spring. ..	3000	.05	.03½	.03½	.03½
1.40	.45	N. Superior .	3945	.52	.55	.52	.52
.25	.09	N. York	14726	.10	.12¼	.10	.12
.36	.09	Northcal	10200	.11	.12	.11	.11
4.60	2.25	North Can .	600	2.60	2.45	2.40	2.40
		Do. 5½% pf.					
36.00	20.00	††‡1.37 ...	115	21.00	21.75	21.00	21.00
1.80	.80	Do. warr. .	2410	.85	.94	.80	.80
.02	.00¾	N. Cont. ...	17000	.00⅞	.01½	.01¼	.01¼
.42	.16	Northland ..	1000	.19	.18	.18	.18
.14	.05	Nuco	3217	.08	.08	.06	.07½
.25	.07	Nu-Ridgeway	500	.08	.08	.08	.08
		O, P					
1.35	.45	Okalta	12200	.58	.55	.51	.51
1.95	1.24	Oregon N.G..	nil	..	B1.05	A1.20	1.95
18.37½	10.25	Pac. Pete. ..	11388	10.87½	11.12½	10.25	11.00
12.75	7.15	Do. warr. .	710	†7.00	7.75	†7.00	7.50
.60	.26½	Palliser	nil	..	B.31	A.50	.50
.95	.29	Pamoil	7600	.38	.38	.36	.36
4.00	2.75	Parker Dr. ‡.25	400	3.05	3.05	3.05	3.05
.75	.25	Peace River.	15300	.31	.30	.28	.30
1.80	.66	Permo pf. .	21300	.66	.70	.66	.69
1.75	.73	Peruvian	nil	..	B.74	A.85	.80
2.79	.97	Petrol	24500	1.03	1.07	1.00	1.04
1.64	.60	Phillips	30900	.77	.83	.70	.70
1.80	.60	Place Gas ..	32800	.82	.84	.80	.80
.31	.16	Ponder	2600	.20	.19	.19	.19
4.55	1.85	Prairie	500	2.18	2.23	2.15	2.20
.28	.13	Prosper	nil	..	B.13	A.15	.15
3.30	2.25	Provo	22039	2.38	2.40	2.32	2.35
		Q, R					
.09	.03	Que. Oil D. .	3075	.04	.03½	.03½	.03½
.17	.08	Quonto	1250	.09	.08	.08	.08
.17	.08	Ranchman's O.	100	.10	.09	.09	.09
2.28	1.30	Ranger	3150	1.35	1.35	1.33	1.35
.10	.04	Reef Explor.	4500	.05	.05	.04½	.04½
.05	.03	Renfrew	nil	..	B.03	A.03½	.03
.14	.05	Rocky Pet. .	2500	.06	.07	.06½	.07
.48	.13	Royal Can. V.	13700	.16	.16	.14	.15
11.87½	5.70	Royalite	2965	7.30	7.60	7.30	7.55
		Do. 5¼% pf.					
23.50	17.00	1.31¼	110	17.50	18.50	18.50	18.50
		S					
1.10	.63	Sage	nil	..	B.67	A.74	†.52
1.58	.56	Sapphire	5000	.71	.72	.70	.70
63.00	33.00	Do. 5% debs.	nil	..	B40.00	A43.00	41.50
1.55	1.00	Sarcee P. ..	2200	1.05	1.05	1.01	1.04
.09	.01¾	Sastex	nil	..	B.02	A.03¾	.02¼
12.13	5.75	Scurry Rainb.	264	6.63	6.50	6.38	6.50
7.30	3.40	Security	2900	3.40	3.65	3.40	3.60
.11	.03	Share Oils ..	4000	.05	.04½	.04½	.04½
.08	.03	Silver City .	nil	..	B.03	....	.04
1.30	.50	Siscalta	500	†.56	.56	.56	.56
1.50	.99	So. West Pete.	nil	..	B1.47	....	1.50
.49	.15	So. Union ..	51800	.20	.18½	.17	.18
.22	.11	Spooner	11525	.18	.17½	.15½	.16½
.82	.40	Stanwell	4291	.45	.45	.40	.45
.08	.04	Sturgeon ...	nil	..	B.04¾	A.06	.04⅞
2.10	1.10	Submarine ..	5108	1.38	1.40	1.22	1.24
		T, U, V					
2.00	1.25	Tex Star ...	nil	..	B1.42	A1.50	1.40
1.96	.79	Tidal Pet. ..	24675	.85	.91	.85	.90
.94	.23	Titan	13058	.31	.32	.29	.31
.04	.02½	Transfield ..	nil	..	B.02½	A.03½	.02½
6.75	3.15	Triad	5995	3.30	3.40	3.20	3.30
.07	.03	Tri-Zone	nil	..	B.03½	A.07	.05
.24	.18	Turner V. ..	nil	..	B.16	A.19	.18
2.03	.90	Un. Canso v.t.	237	.91	.95	.95	.95
2.60	1.53	United Oils .	39133	1.68	1.68	1.53	1.56
.10	.04½	Vandoo	nil	..	B.05	A.06	.05½
1.15	.52	Van Tor	10300	.54	.54	.52	.52
		W, Y					
.22	.08	Wayne	2500	.10	.10	.09½	.09½
.28	.12	Wespac	2000	.18	.17	.17	.17
2.15	1.50	Westates	4574	1.75	1.80	1.60	1.65
.93	.60	W'burne	16048	.65	.70	.64	.66
2.32	1.15	W. Cdn. O&G	36716	1.79	1.84	1.64	1.64
1.09	.50	Do. warr. .	100	.53	.55	.55	.55
2.25	1.20	W. Decalta .	7305	1.30	1.30	1.20	1.28
4.25	3.50	W. L'holds .	100	3.50	3.50	3.50	3.50
1.06	.41	W. Naco	nil	..	B.44	A.47	.42½
.15	.05	W. Warner .	nil	..	B.07	A.08	.07½
.14	.04½	Y'ke Can. ..	6000	.05	.05	.05	.05

▲U. S. funds. ▲▲Initial. †Less than board lot. ♦When shown nil the figures are bid, asked and latest sale. *Paid or declared in 1960. ‡Paid in 1959. ‡Extra paid in 1959, shown for record purposes only, does not necessarily apply to 1960 dividend rate or payments. •After partial assets distribution. †Dividend action deferred.

Here Are Montreal Bank New Staff Appointments

E. E. R. STEELE, accountant, Timmins, Ont., to be manager, Ontario and Regent Streets, Sudbury, Ont.

A. M. J. FIELD, assistant general manager's department, Vancouver, B.C., to be manager of a new branch to be opened shortly at Broadway and Yew Street, Vancouver.

A. E. GEDGE, head office, to be an assistant superintendent, head office.

J. U. F. B. BELAIR, manager, Edmunston, N.B., to be manager, Chicoutimi, Que.

J. G. SABRAN, manager, Mont Joli, Que., to be manager, Edmunston, N.B.

M. FISET, manager, St. Sacrement, Que., to be manager, Mont Joli, Que.

J. U. B. ROUSSEAU, accountant, Granby, Que., to be manager, St. Sacrement, Que.

J. G. ANDERSON, an assistant manager, St. John's, Nfld., to be an assistant manager, Drummond and St. Catherine Streets, Montreal.

R. W. TYNER, manager, Cote St. Catherine Road and Decarie Boulevard, Montreal, to be manager, Montreal West.

N. J. GRYCAN, Montreal credit department, head office, to be manager, Cote St. Catherine Road and Decarie Boulevard, Montreal.

F. J. MORGAN, assistant manager, Sydney, N.S., to be manager, Bridgewater, N.S.

B. G. LEVY, accountant, Sydney, N.S., to be assistant manager, Sydney, N.S.

D. L. MacINTOSH, Quebec credit department, head office, to be manager, Montreal Road and St. Laurent Boulevard, Ottawa.

K. M. TUDMAN, manager, Montreal West, to be manager, St. Henri, Montreal.

G. B. M. THOMPSON, manager, Ontario and Regent Streets, Sudbury, Ont., to be manager of a new branch opening shortly at Grand Marais Road and Curry Avenue, Windsor, Ont.

Industrial Stocks

(CONTINUED FROM PAGE 44)

Range 1959-60 High	Low	Div. R'te Feb12 $	Y'ld %	Company	♦Sales	Last Feb. 5	Week end. Feb. 12 High	Low	Close or Latest
39¼	34¼	2.00	5.8	West Grocers A .	275	†33¾	34¾	34¼	34¼
28	24	1.40	5.7	Do. Pref.	25	24⅞	24½	24½	24½
130	125	7.00	5.6	West Koot. Pref.	nil	..	..	..	125
19¼	13	▪.17½+‡.10		West Plywood B	260	15¼	15	14⅝	14¾
38	32	.70	2.0	Westminster P. ..	150	35½	35½	35½	35½
44½	29	.70	2.3	Weston G. A	1406	31	30¾	29	30
44½	29½	.70	2.3	Do. (B)	422	31¾	31⅝	29½	30
95	81	4.50	5.5	Do. 4½% Pref.	nil	..	B82	A83	82
24½	11	..	..	Do. Warr.	4150	12⅝	12½	10¾	10¾
108	100	6.00	5.9	Do. 6% Pref. ..	nil	..	B101½	A102	102
35	29	2.80	8.8	White Hard Pfd. .	45	33	32	32	32
8¾	6⅞	‡.10	..	White Pass Yukon	nil	..	B7	A7¼	6⅞
43¾	43¾	‡1.50	..	Willson Stat.	nil	..	B42	A45	43¾
†99½	†99	5.00	5.1	Do. Pref.	nil	..	B99	..	†99
70	33	‡▪	..	Windsor Hotel ..	nil	..	..	A30	†32
600	500	..	..	Wpg. Win. Club .	nil	..	..	..	525
6.50	4.25	.30	6.3	Wood Alex	50	4.75	4.75	4.75	4.75
96	95	5.50	5.9	Wood, G. H. 5½%Pf.	nil	..	B29⅞	..	†92⅞
30¼	24¾	1.60	5.9	Wood J. A	495	27¼	27	26½	27
84	79½	4.50	5.4	Do. Pref.	20	82½	82⅝	82⅝	82⅝
.50	.50	..	..	Woodford A	nil	..	B.50	..	.50
.10	.10	..	..	Do. (B)	nil	..	B.10	..	.10
40	37	‡▪	..	Woods Mfg.	128	37	37	37	37
24¼	17¼	‡.40	..	Woodward A ...	1940	17¼	18	17⅝	17¼
13.50	5.75	..	..	Do. Warr.	1500	6.25	6.25	5.75	5.75
8.50	7.50	.60	7.3	Wool Combing ..	nil	..	B7.00	..	8.25
2.00	1.50	..	..	York Knitting A	nil	..	B1.50	A1.50	1.50
.30	.05	..	..	Do. (B)	85	.22	.20	.20	.20
40½	31¾	1.20	3.7	Zellers	550	32	32½	31¾	32⅛
48	42	2.25	5.4	Do. 4½% Pref.	200	44	42½	42	42
3.10	2.45	.16	5.9	Zenith	8175	2.60	2.75	2.60	2.70

▲U. S. funds. ▲▲Participating divd. •Dividend action deferred. ▪Stock divd. ♦♦Initial. †Less than board lot. ♦Note: When sales show nil the figures are bid, ask and latest sale. ‡Extra paid in 1959, shown for record purposes only does not necessarily apply to 1960 dividend rate or payments. ▪▪On arrears. ♦♦On redempt. ♦Paid on arrears. ••Special tax-free stk. distribution redeemed at 45c per share. ††Paid or declared after stock split. ‡Paid in 1959. *Paid or declared in 1960. ‡‡Includes participating dividend.

Dividends Declared

(CONTINUED FROM PAGE 44)

	This payment $	Date payable	*Date of record
Pembina Pipeline pf	.62½	Mar. 1	Feb. 15
Photo Engravers ..	.40	Mar. 1	Feb. 15
Premier Trust	2.00	Apr. 1	Mar. 18
Price Bros.	.50	May 2	Apr. 1
Pronto Uran.	.60	Apr. 20	Mar. 31
Que. Power	.40	Feb. 25	Jan. 15
Que. Tel.	.45	Apr. 1	Mar. 18
Quemont M.	.20	Mar. 31	Mar. 4
Rap. Grip & Bat. .	.15	Apr. 1	Mar. 14
Robinson Little A	.25	Mar. 1	Feb. 15
Rolland Pap. A	.25+‡.25	Mar. 1	Feb. 15
Do B	.15+‡.25	Mar. 1	Feb. 15
Do 4¼% pf	1.06¼	Mar. 15	Mar. 1
Royal Bank	.52½	Mar. 1	Jan. 30
St Lawr. Corp. ...	.25	Apr. 25	Mar. 25
Do 5% pf A ..	1.25	Apr. 25	Mar. 25
Salada-Shirriff Hor.	.06	Mar. 15	Feb. 23
Savs. & Inv. Corp.	.04½	Feb. 15	Jan. 31
Scythes & Co.	.25	Mar. 1	Feb. 12
Do 5% pf	.31¼	Mar. 1	Feb. 12
Shaw W & P com.	.20	Feb. 25	Jan. 14
Do A	.33½	Feb. 15	Jan. 19
Do 4% pf Ser. A	.50	Apr. 2	Mar. 2
Do 4½% pf Ser. B	.56¼	Apr. 2	Mar. 2
Sherwin-Wms ord.	.45	May 2	Apr. 8
Do 7% pf	1.75	Apr. 1	Mar. 10
Silverwood Dair. A	.15	Apr. 1	Feb. 29
Do B	.15	Apr. 1	Feb. 29
S.K.D. Mfg. 6% 1st pf	.15	Mar. 1	Feb. 15
Do 6¼% pf	.31¼	Mar. 1	Feb. 15
Simpsons Ltd.	.17½	Mar. 15	Feb. 15
N. Slater	.30	May 2	Apr. 8
Do pf	.53	Apr. 14	Mar. 25
Southam Press ...	.80	Mar. 28	Mar. 14
Stand. Brands	†.37½	Mar. 15	Feb. 15
Stand. Oil of Calif.	†.50	Mar. 10	Feb. 10
Stand. Radio	.15	Apr. 8	Mar. 18
Steinberg's Ltd. A & com.	.10	Mar. 2	Feb. 17
Sterling Trusts	.50	Apr. 1	Mar. 15
D. A. Stuart Oil ..	.25	Mar. 1	Feb. 2
Supercrete **Stk. Div.			Feb. 15
Superior Prop. ...	.10	Mar. 15	Feb. 29
G Tamblyn	.20	Apr. 1	Mar. 4
Do pf	.50	Apr. 1	Mar. 4
Tel.-Electronics fd	†.08	Feb. 29	Jan. 29
Texaco Can. com. .	.40	Feb. 29	Jan. 30
Third Cdn. Gen. In.	.15	Apr. 14	Mar. 31
Thompson Pa. Box	.03	Mar. 1	Feb. 22
Do 6% pf	.75	Mar. 1	Feb. 22
Thompson's Sv. Sts.	.02½	Mar. 1	Feb. 15
Tor. Elev.	.10	Mar. 1	Feb. 17
Trans Can. Corp. Fd.	.25	Apr. 1	Mar. 15
Do	.25	Jul. 1	Jun. 15
Do	.25	Oct. 1	Sep. 15
Do	.25	Jan. 4	Dec. 15
Un. Keno Hill M.	.10	Apr. 25	Mar. 31
Viceroy Mfg. A ..	.12½	Mar. 15	Mar 1
Vic. & Grey Tr. ..	.35	Mar. 15	Feb. 26
Virg. Dare pf	.31¼	Mar. 1	Feb. 15
Waite-Amulet M. .	.20	Mar. 10	Feb. 16
H. Walker-Good. & Worts	.35	Apr 16	Mar. 18
West. Can. Brew. .	.30	Mar. 1	Jan. 29
West Plywood A .	.25	Apr. 1	Mar. 10
Geo. Weston A ...	.17½	Apr. 1	Mar. 10
Do B	.17½	Apr. 1	Mar. 10
Do 4½% pf	1.12½	Mar. 1	Feb. 15
Do 6% pf	1.50	Mar. 1	Feb. 15
G. H. Wood 5½% pf	1.37½	Mar. 1	Feb. 15

‡—First foll. 3-for-1 stk. split.
†—U.S. funds. ‡Extra.
*—The ex-dividend date is usually at least two full business days prior to the record date.
♦—Initial for per. Dec. 10-Dec 29.
▪—Initial.
▲—First foll. 10-for-1 stk. split.
**—Stk. Divd. of 2 com. shs. (.25c) par) for ea. 100 shs. held.
▪▪—Participating.
‡‡—First foll. 10-for-1 stk. split.

Company Meetings

Date	Company	Place
Feb. 18	Halton & Peel Tr. & Say's.	Oakville, Ont.
Feb. 18	Royal Trust Co.	Montreal
Feb. 19	Dominion Bridge Co.	Montreal
Feb. 22	Haitian Copper Min.	Toronto
Feb. 22	Robinson Cotton Mills	Woodbridge, Ont.
Feb. 23	Global Life Ins. Co.	Toronto
Feb. 24	Canada Accident & Fire Ins.	Montreal
Feb. 24	Dom. Insurance Corp.	Toronto
Feb. 25	Br. Northwestern Ins.	Toronto
Feb. 25	Economic Inv. Trust	Toronto
Feb. 25	Eureka Corp. Ltd.	Toronto
Feb. 25	Foreign Power Secs.	Montreal
Feb. 25	Security National Ins.	Toronto
Feb. 26	Moneta Porc. M.	Toronto
Feb. 29	Can.-Erin Mines	Toronto
Feb. 29	Can-Met Explor. Ltd.	Toronto
Feb. 29	Cons. Denison Mines	Toronto
Mar. 1	Globe Indemnity Co.	Montreal
Mar. 1	Hudson Bay Ins.	Montreal
Mar. 1	Liverpool-Manitoba Ass.	Montreal
Mar. 3	Building Products Ltd.	Montreal
Mar. 10	Bell Telephone	Montreal
Mar. 10	B.C. Telephone Co.	Vancouver
Mar. 10	Massey-Ferguson Ltd.	Toronto
Mar. 14	Toronto Mut. Life Ins.	Toronto
Mar. 25	Cinzano Ltd.	Montreal
Mar. 30	Canada North-West Land Co.	Toronto
Apr. 14	Aro Equipment Corp.	Bryan, O.
Apr. 19	Chrysler Corp.	Wayne Co., Mich.
Apr. 21	National Lead Co.	Sayreville, N.J.

SUBSIDIARIES AMALGAMATE

Three U. S. subsidiaries have been merged to form **McGraw-Edison (Canada) Ltd.**, with headquarters in Toronto. The subsidiaries form three divisions: **Thomas A. Edison Industries,** Toronto, maker of dictating equipment; **CLM Industries** (formerly **Canadian Line Materials Ltd.**), Scarborough, electrical transmission and distribution equipment; and the **Small Appliance Division,** Oakville, Ont., maker of power tools, hair dryers and clippers.

Government Bonds

Investors seeking the best security and marketability combined with a generous income return, should now consider investing some proportion of their funds in Government of Canada and Provincial Bonds. Yields are higher now than in the past 25 years—ranging from 5% to over 6%. List on request.

Enquiries Invited

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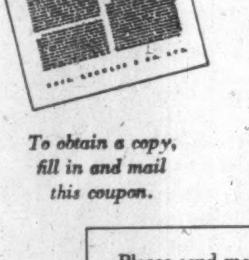
TORONTO, ONTARIO

Bell Telephone —

This two billion dollar Canadian company is doing more business, reporting higher earnings, paying better dividends than ever before in its history. Read about Bell's remarkable progress in the current issue of *The Monthly Bulletin.*



To obtain a copy, fill in and mail this coupon.

February Contents

- Essay On Population
- The Big Computer
- Bell Telephone Company
- A "Cheque-A-Month" Plan
- Investment Selections

Please send me a copy of your current Monthly Bulletin

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ADDRESS..

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Ross, Knowles & Co. Ltd.

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CAN-MET SHAREHOLDERS!

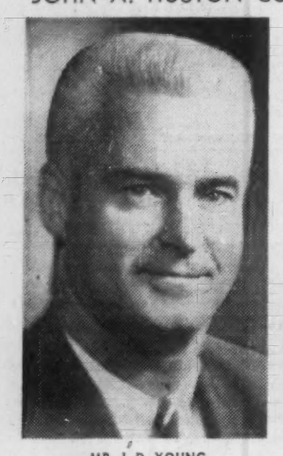
Under the terms of the proposed merger between Can-Met and Consolidated Denison, Can-Met shareholders are to receive 1 share of Consolidated Denison for 200 shares of Can-Met. As large shareholders (200,000) in Can-Met we feel that this offer is extremely unfair. Anyone interested in utilizing these shares in an effort to obtain a more reasonable offer contact

Calgary AM 3-2044, AL 5-4702 or write

Box 285, The Financial Post, Toronto

ANNOUNCEMENT

JOHN A. HUSTON CO. LTD. APPOINTMENTS



MR. J. D. YOUNG

MR. W. VAN HOUTEN

D. H. Love, President, John A. Huston Co. Ltd., distributors in Canada and throughout the British Commonwealth for Drug, Toiletry, Hardware and Houseware items, announced the following appointments at a recent meeting of the Board of Directors.

Mr. J. D. Young, formerly Vice-President, was elected to the office of Executive Vice-President. Mr. Young is also President of Germaine Monteil Canada Limited, an exclusive cosmetic and perfume line, distributed in Canada by the Huston Company.

Mr. W. Van Houten, formerly Sales Manager, Houseware and Hardware Divisions, was elected to the office of Vice-President and appointed a director of the company.

P.E.I. Regulates Motor Carriers

A new Motor Carrier Act, first attempt by Prince Edward Island to provide extensive regulation of bus and truck traffic, has been proclaimed and will go into effect April 1.

Provisions include a regulation that every operator of a public motor truck within the province shall file his tariff of rates with the provincial commission annually, and no goods may be carried except at approved rates.

MILLIKEN LAKE URANIUM MINES LIMITED

5¼% First Mortgage Bonds and 6% First Mortgage Sinking Fund Bonds

NOTICE OF MEETING OF BONDHOLDERS

NOTICE IS HEREBY GIVEN that a meeting of the holders of 5¼% First Mortgage Bonds (the 5¼% Bonds) and 6% First Mortgage Sinking Fund Bonds (the 6% Bonds) of MILLIKEN LAKE URANIUM MINES LIMITED (the Company) issued under and secured by a Deed of Trust and Mortgage (the Trust Deed) dated as of March 15, 1957 made by the Company in favour of Crown Trust Company, as Trustee (the Trustee), will be held in the Library, Main Mezzanine, Royal York Hotel, 100 Front Street West, in the City of Toronto, in the Province of Ontario, Canada, on Monday, the 14th day of March, 1960, at the hour of 10.30 o'clock in the forenoon (Eastern Standard Time) for the purpose of considering and, if thought fit, passing as an Extraordinary Resolution or Extraordinary Resolutions pursuant to the provisions of the Trust Deed one or more resolutions for the following purposes, namely:

1. To sanction certain changes in the provisions of the Trust Deed and the modification, abrogation, alteration, compromise or arrangement of the rights of the bondholders against the Company or against its property involved in or necessary or advisable for giving effect to and carrying out an amalgamation (the Amalgamation) of the Company with Algom Uranium Mines Limited (Algom), Northspan Uranium Mines Limited (Northspan) and Pronto Uranium Mines Limited (Pronto) pursuant to the provisions of Section 96 of The Corporations Act, 1953 (Ontario) to continue as one company under the name Rio Algom Mines Limited (the Amalgamated Company), under the terms and conditions of an agreement (the Amalgamation Agreement) made the 29th day of January, 1960 between the Company, Algom, Northspan and Pronto, and in particular and without in any way limiting the generality of the foregoing by providing:
   (a) that the Company may cancel, modify or amend the Eldorado Contract (as defined in the Trust Deed) and may, together with Algom, Northspan and Pronto, enter into a single master contract (Master Eldorado Contract) with Eldorado Mining and Refining Limited effective upon the Amalgamation, provided that an undivided 20% interest in the Master Eldorado Contract and in the proceeds payable by Eldorado Mining and Refining Limited thereunder shall be assigned to the Trustee;
   (b) that the first fixed and specific mortgage, pledge and charge and the floating charge contained in the Trust Deed shall apply only to properties, assets and undertakings owned by the Company immediately prior to the Amalgamation and shall not apply to any other properties, assets or undertakings of the Amalgamated Company except to the extent of an undivided 20% interest in the Master Eldorado Contract and in the proceeds payable by Eldorado Mining and Refining Limited thereunder;
   (c) that nothing in the Trust Deed shall apply to or operate to prevent the assumption by the Amalgamated Company of any funded obligations of Northspan or of any other funded obligations relating to property which may be acquired from companies other than Algom, Northspan and Pronto and the compliance by the Amalgamated Company with all covenants, conditions and terms of any and all indentures securing any such funded obligations;
   (d) that (except as aforesaid) to the extent the terms, conditions and provisions of the Trust Deed and the covenants of the Company therein contained are inconsistent with or repugnant to any of the terms, conditions, provisions or covenants contained in any indenture securing funded obligations of Northspan, the Trust Deed shall be deemed amended to the extent necessary to eliminate such inconsistency or repugnancy; and
   (e) that all covenants in the Trust Deed shall be amended effective upon the Amalgamation to the extent necessary to permit the Amalgamated Company to conduct its operations as a whole in the most efficient manner utilizing only such of its mines, plant and equipment as it may consider to be most economical and efficient;
2. To sanction certain changes in the provisions of the Trust Deed and the modification, alteration, abrogation, compromise or arrangement of or in respect of the rights of the bondholders against the Company effective upon the Amalgamation to accelerate (subject to the prior payment in full of the 5¼% Bonds) the sinking fund payments prescribed by Article VII of the Trust Deed so that the amounts due for fixed sinking fund payments and upon maturity of the 6% Bonds shall be as follows:

Due Date	Present Payments	Substituted Payments
December 16, 1960	$ 2,000,000	$ 4,000,000
June 15, 1961		4,000,000
December 15, 1961	7,000,000	4,000,000
June 15, 1962		3,000,000
December 15, 1962	7,000,000	1,000,000
Total	$16,000,000	$16,000,000

3. To authorize and direct the Trustee to concur in and execute from time to time any deeds supplemental to the Trust Deed embodying any such change, modification, alteration, abrogation, compromise or arrangement and/or which may be necessary or advisable for giving effect to and carrying out the Amalgamation and/or the said Extraordinary Resolution or Extraordinary Resolutions.

In the opinion of the Trustee, the business to be transacted at the said meeting especially affects the rights of the holders of 6% Bonds in a manner and to an extent substantially differing from that in or to which the rights of the holders of 5¼% Bonds are affected and, accordingly, the said meeting of bondholders shall be and be deemed to be a serial meeting.

This notice is given pursuant to the provisions of the Trust Deed to the intent that any Extraordinary Resolution or Extraordinary Resolutions passed at the said meeting or any adjournment thereof shall, if passed in accordance with the provisions contained in the Trust Deed in that behalf, be binding upon all bondholders, whether present or absent, and each and every holder of Bonds and the Trustee (subject to the provisions for its indemnity contained in the Trust Deed) shall be bound to give effect thereto accordingly. The foregoing does not purport to specify the terms of any resolution or resolutions to be proposed at the meeting, but indicates only the general nature of the business to be transacted thereat and in general terms the subject matter of any Extraordinary Resolution or Extraordinary Resolutions to be submitted thereat.

A copy of this notice, Instructions to Holders of Bonds Relating to Attendance and Voting at the Meeting and an explanatory statement entitled Information Regarding Proposed Plan of Amalgamation is being mailed to all registered holders of Bonds together with a form of proxy. Copies of such documents, forms of Voting Certificates, proxies and other documents to enable the holders of unregistered Bonds to be present and vote at the meeting and at any adjournment thereof without producing their Bonds, and to enable them to be represented and to vote by proxy thereat and to deposit proxies and Voting Certificates at places other than the place where the meeting is to be held, may be obtained on application to any of the offices of Crown Trust Company mentioned below.

DATED this 17th day of February, 1960.

MILLIKEN LAKE URANIUM MINES LIMITED
GEORGE BAKER
Secretary

For the convenience of bondholders unable to attend the meeting, proxies and Voting Certificates may be deposited at any one of the following offices of Crown Trust Company:
302 Bay Street, Toronto, Ontario,
393 St. James Street, West, Montreal, Quebec,
364 Main Street, Winnipeg, Manitoba,
455 Howe Street, Vancouver, British Columbia.

For further information regarding the meeting referred to above, together with a proxy and other related papers, please write or send the coupon below to Milliken Lake Uranium Mines Limited, at the address shown below, or c/o Crown Trust Company at any of the above addresses.

Milliken Lake Uranium Mines Limited,
335 Bay Street,
Toronto, Ontario, Canada.

Dear Sirs:

Please send further information relating to the meeting of bondholders of Milliken Lake Uranium Mines Limited to:

Name.....

Address.....

City.....

Taking Stock

What's going on in the mining and oil markets — the facts and rumors.

By ALEX WILSON

Most of the legal details surrounding the contract juggling and mergers in Canada's uranium industry are now settled.

But investors are still seeking answers as some stock prices flounder.

This week **Rio Tinto** announced the terms of the merger arrangements involving the four Blind River uranium mines in its orbit.

Judging from the stock prices investors were not initially happy at the proposals, as all of the stocks in the group slipped off.

Biggest surprise in the group is **Pronto.** Analysts calculate that on the basis of the proposals, the other three stocks were fairly priced. But the Pronto price was apparently ignoring the 60c dividend payable on April 20. Record date of the dividend is before the effective date of the merger.

Here is how the Rio Tinto uranium group have acted:

	Latest Price	Early January	—1959-60— High	Low
	$	$	$	$
Algom	11¾	13¼	17	10
Milliken	.87	1.02	2.90	.67
Northspan	.90	1.11	2.55	.75
Pronto	2.75	2.55	5.00	2.20
Preston	4.60	4.95	8.35	4.40

* * *

Among other uraniums, **Can-Met** is also a surprise.

Although the 1-for-200 share exchange of **Cons. Denison** for Can-Met was made official last week, the stock is still hovering at 10c a share. Analysts say that on the basis of exchange terms Can-Met has a value of 5c. Reason for strength is reported to be keyed to a heavy short position in the stock. Traders say many undeclared shorts are covering. It touched a low of 8c after the exchange basis became official but then crept back to 10c.

Opposition to the proposal may also be a factor. Rumors have been circulating that attempts are being made to form a protective committee to oppose the merger.

* * *

Deep work at **New Calumet Mines** zinc property has sparked new interest. At mid-week the company was just getting into a new ore zone on the 1,675-ft. level. This is the same zone that turned up in previous drilling from the 1,200-ft. level where a 28-ft. intersection averaged 15% zinc and 6% lead. News that the drive on the lower level had reached good ore pushed the stock to 42½c from 33c.

Brunswick Mining & Smelting churned actively all week as rumors circulated about financing arrangements to bring its base metal property into production. Brunswick at mid-week slipped to $4.75, off from high of $5.40.

Anacon Lead Mines, which holds 790,000 shares of Brunswick, has also been bouncing. Besides the heavy share interest, Anacon is reviving work on its property in New Brunswick. At 74c at mid-week, it is off from peak of 90c this year.

* * *

Copper stocks were highlighted by **Orchan.** It touched $1.31 before slipping back to $1.23 at mid-week. Activity is centred on speculation of drilling results in new zinc-copper zone. Latest hole is reported to show a 250-ft. intersection of mineralization.

Among the pennies, **Vanguard Exploration** bounces ahead as officials lay plans for exploration, expected to start in spring. The ground still needs to be mapped before a drill program can be laid out. Stock touched 48c at mid-week, ahead from recent 39c level.

Northgate Exploration touched a new high of 57c before settling back to 53c at mid-week. It has recently acquired an old gold property about 10 miles east of Val d'Or, where previous drilling is said to have returned some holes with $50 gold over 40 ft. Northgate now has a crew on the ground with a geophysical program under way and drilling planned.

* * *

ON THE OIL AND GAS FRONT—Prices continue weak with the western oil index of the TSE touching a new low for the year at 98.16.

Hudson's Bay Oil & Gas strengthens to $12¾ from recent $12¼ as it reports net operating income nearly double old rate at 16c a share.

West Canadian Oil continues to settle back as no further word comes out on takeover negotiations. At $1.64 it is off from high of $1.84 touched during early rumors.

Company Reports

Mining

STEEP ROCK IRON MINES had a net profit of $9,049,493 in 1959 ($1,386,508 in the preceding fiscal year).

Higher profit reflects increased ore shipments, which climbed to 2,746,849 tons from 1,156,358 in 1958. Bulk of the ore, 2,389,796 tons, came from open pit operations.

Both beneficiating plants operated last year, and President M. S. Fotheringham states that the products received ready acceptance.

The research staff continued to work with the steel industry seeking ways of providing ores specially suited to customer requirements. One change to aid this policy was modification of loading facilities to permit classification of direct shipping ores.

The expansion operation involving dredging of the G ore zone will continue this year and expenditures are budgeted at $2,723,000. Mining is expected to start in the G zone in 1961 although dredging won't be completed until 1962.

A low grade property acquired by Steep Rock is expected to attract early attention from the steel mills. Fotheringham states that an annual production of three million tons of pellets could be reached. Royalty income from the property would be important, he said.

ANNOUNCEMENT

NEW CHAIRMAN CANADIAN BRITISH ALUMINIUM CO.

LORD PLOWDEN, K.C.B., K.B.E.

The Board of Directors of Canadian British Aluminium Company Limited announces the election of Lord Plowden as a director and Chairman of the Board. Lord Plowden succeeds Sir Ivan A. R. Stedeford as Chairman and a director of C.B.A.

Lord Plowden is Chairman of The British Aluminium Company Limited and Vice-Chairman of Tube Investments Limited, both of England. Before taking up these appointments at the beginning of 1960, Lord Plowden was the Chairman of the U.K. Atomic Energy Authority, an office which he had held since its creation in July 1954.

INCOME ACCOUNT

Years Ended Dec. 31:	1959 $	1958 $
Production	31,590,340	13,512,658
Less: Trans. & mkt. exp.	12,422,085	5,135,720
Oper. exp.	7,466,123	4,766,956
Oper. profit	11,702,132	3,609,982
Add: Prof. sale f.a.		48,545
Invest. income	297,447	155,996
Prof., U.S. exch.	3,800	499,823
Exch. gain re s.f.	66,125	48,875
Net earnings	12,069,504	3,763,575
Less: Funded debt int.	430,584	580,747
Amortization	907,650	410,793
Depreciation	1,549,272	1,277,070
Outside expl. w/o	132,505	108,457
Net prof. & surp.	9,049,493	1,386,508
‡Loss.		
Earnings per Share:		
Common	$1.13	$0.17
No dividends paid.		
Shares o/s as at Dec. 31:		
Common, $1 par	8,045,110	8,045,110

CONDENSED BALANCE SHEET

As at Dec. 31:	1959	1958
Cash	$4,100,459	$5,033,670
Short-term notes	8,770,309	.....
Accts., etc., rec.	119,971	113,708
Mktble. secs.‡	.....	372,940
Stores & supplies	601,265	684,708
Prepaid exp.	61,723	97,856
Total curr. assets	13,653,727	6,302,882
Preprod. & dev. exp.†	60,871,666	57,859,270
Deferred charges	65,651	225,243
Other assets	1,376,570	1,246,571
Bldgs., land & mach.*	12,018,165	13,681,365
Mining props.	4,379,629	4,379,929
Total assets	92,365,408	83,695,260
Accts., etc., pay.	1,250,162	644,382
S.f. bond instal.	1,617,125	1,636,250
Taxes	401,550	1,550
Total curr. liab.	3,268,837	2,282,182
Funded debt	11,662,000	13,328,000
Royalty loan	9,833,791	9,333,791
Common stock	8,045,110	8,045,110
Contrib. surplus	3,568,057	3,568,057
Earned surplus	55,987,613	46,938,120
‡Market value	.....	390,560
*After depr. of	15,494,145	13,280,135
†Less amortization.		
Working capital	10,384,890	4,020,700

Contingent liabilities of the company at Dec. 31, 1959, included approx. $958,000 re employees' housing plans and approx. $180,000 re uncompleted contracts for equipment, etc.

OPERATING STATISTICS

	1959	1958
Tonnage shipped	2,746,849	1,156,358
Average recovery	$11.36	$11.69

42,000 Shareholders Tackle Uranium Merger

The big changeover in the uranium operations of **Rio Tinto Mining Co. of Canada** companies (**FP**, Feb. 6) is being considered by some 42,000 shareholders of seven companies in the group.

At a series of meetings starting at the end of February and stretching into mid-March, these key proposals will be examined.

- Merger of **Algom Uranium Mines, Milliken Lake Uranium Mines, Northspan Uranium** and **Pronto Uranium** into **Rio Algom Mines** on the basis:

—165 shares of Rio Algom for each 100 Algom.

—14 shares Rio Algom for each 100 Milliken.

—13 Rio Algom for each 100 Northspan.

—35 shares Rio Algom for each 100 Pronto shares.

- **The new company** will assume total funded debt of about $119 million, take over uranium contracts amounting to about 31 million lb.

- **Production will be stretched out** to Nov. 30, 1966 with the two Algom mines expected to operate through to May 1965 when Nordic will close leaving Quirke to clean up the contract. Northspan and Milliken will be closed during the remainder of this year and Pronto will soon start converting to treatment of copper.

The schedule of meetings includes **Preston East Dome Mines** which controls Algom, and **Pardee Amalgamated Mines,** which has a big interest in Milliken.

Milliken bondholders will consider changes to bring the trust deed in line with Northspan. One effect will be a slight acceleration in sinking fund payments.

Meetings are:

Preston and Algom on Feb. 29; Northspan and Pronto on March 1; Pardee and Milliken March 2 and Milliken bondholders on March 14.

The new Rio Algom Mines will have an authorized capital of 12 million shares of which 9,912,132 would be outstanding. Rio Tinto Canada will have a net beneficial interest of about 37.57% in Rio Algom through holdings by subsidiaries and affiliates of 5,738,048 shares of the new company.

Here are some of other points on the merger plan:

- **Northspan warrants** will be entitled to subscribe for 13 shares of Rio Algom for every 100 shares of Northspan on payment of $300. This applies to both the Series A (U.S. funds) and the Series B (Canadian funds).
- **It is expected** that no income taxes will be payable through the life of remaining contracts.
- **Dividends cannot be paid** until Northspan bank loans have been cleared away and, under certain conditions, so long as Northspan general mortgage bonds are outstanding. This provision also complies with dividend restrictions in the Milliken trust deed.
- **Long term debt** of the combined company is expected to mature over the next five years ending Oct. 31, as follows: 1960 — $16,171,263; 1961 — $22,249,351; 1962 — $24,737,312; 1963 — $26,374,211; 1964— $12,637,500.
- **Officers and directors** are to be: President, Robert H. Winters; vice-president and director, W. H. Bouck; treasurer, W. B. Malone; secretary, G. Baker; other directors, C. C. Calvin, J. G. Edison, Dr. E. B. Gillanders, S. A. Hayden, J. H. Hirshhorn, R. Jeanty, Dr. F. R. Joubin, J. Herbert Smith, R. W. Wright.
- **Ore reserves** of the combined companies are shown at 47,285,000 tons averaging 2.31 lb. uranium oxide per ton. Algom Nordic and Quirke are shown with more than 17 million tons or enough to complete the contract.
- **Advance payments** to the end of 1962 under the stretch-out scheme are expected to total more than $25 million and are to be applied to reducing funded debt as soon as is practicable after receipt.

Lamaque Zone Still Important

The recent gold find of **Lamaque Gold Mines** in the southeastern section of its property is still showing potential.

N. B. Keevil, chairman of Lamaque, told shareholders that to date the new zone has been traced over length of 150 ft. to a vertical depth of 300 ft. with an average grade of ½ oz. gold per ton. He said that the characteristics of the new zone are similar to the structures in the main mine.

Drilling is continuing to determine the limits of the zone.

Keevil also suggested at the Lamaque and **Teck-Hughes** annual meetings that the approach to payments under the Emergency Gold Mining Assistance Act should be changed.

Suggested changes involved basing payments not only on operating costs, but also on the disparity between the Canadian and U. S. dollar. Effect of the suggestion would be to give Canadian gold producers $35 an ounce in Canadian funds for their output instead of the current average of about $33.36 (equivalent to $35 an ounce in U. S. funds).

HOLDING STOCK THAT SHOULD BE TRADED?

BEING "IN THE MARKET" is more—much more—than simply holding stock. Industrials, for example—some can indeed be held (if participated in at proper price levels) for yield from dividends as well as gradual appreciation over the long-long pull, but others—for a multiplicity of factors and although they may outwardly appear as good as gold—should be traded back and forth, switched in and out of as they approach various resistance points along their various cycles. The latter observation is doubly true for many base metals and, at this time, all but a must for the vast majority of so-called wonder metals, space-age metals and "exotics."

OIL-GAS situations? Mixed. Some of the big pipelines could be held 'til doomsday, but careful of the smaller companies; protect them with stop-loss orders; lower the total cost of your participation by converting paper gains into cash from time to time at critical points along their upswings.

WHEN and where to buy more at lower prices, sell partially at higher prices and protect paper gains with stop-loss orders is one aspect of THE CANADIAN FORECASTER advisory service. Another is selecting certain junior, senior and speculative issues that point to short, medium or long-term capital appreciation. A third is analytical and technical discussion of the general market. A fourth is personal attention at any time to all regular or trial members of our worldwide clientele—this being via phone, wire and direct mail as well as personal conference with the staff. **Main vehicle is our eight-page weekly bulletin, which clients tell us they enjoy reading as well as profiting from. Cordially invite you, therefore, to a $5 trial study ($5.50 airmail) of not only our methods but particularly our selected recommendations over the 60 days ahead. Remember to list stocks you own or contemplate owning in your first letter and write: THE CANADIAN FORECASTER, 238 Adelaide Street West, Toronto. EMpire 4-5421-2. Annual fee—$45.**

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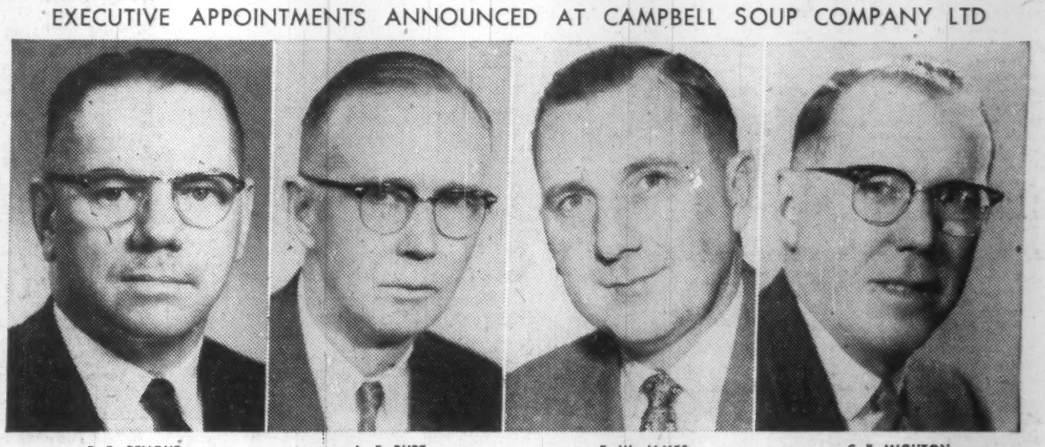
EXPLORATION

ANNOUNCEMENT

EXECUTIVE APPOINTMENTS ANNOUNCED AT CAMPBELL SOUP COMPANY LTD



E. R. RENOUF — A. E. BURT — E. W. JAMES — C. E. MIGHTON

Announcement is made by Campbell Soup Company Ltd, of four new executive appointments. E. R. Renouf, vice-president—administrative and a director of the company, leaves the Canadian firm to become managing director of Campbell Soups S.P.A., Parma, Italy. Mr. Renouf was born in Guelph, Ontario, and received his BSA degree at the Ontario Agricultural College. A. E. Burt, traffic manager and assistant to the general manager, has been named a director of the Canadian company. Mr. Burt, who was born and educated in Toronto, joined the Company in 1931. E. W. James, assistant manager at the Portage la Prairie plant, has been made plant manager. Mr. James who was educated in Toronto joined the Company in 1940. C. E. Mighton, manager of the company's agricultural department, has been named purchasing agent. Mr. Mighton was born near Elora, Ontario. He received his BSA in Botany at the Ontario Agricultural College.

CONTINUED SOUND GROWTH

HIGHLIGHTS FROM THE 54th ANNUAL REPORT

	1958	1959
Insurance in force	611 millions	695 millions
New business	125 millions	133 millions
Assets	65 millions	74 millions
Net interest rate earned	5.12%	5.24%

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CHANGES NAME

The name of **Gulf States Oil Co. of Canada** has been changed to **Western Natural Gas Co.** This is a change of name only and the company will continue to have its Canadian headquarters in the Royalite Building, Calgary, with its personnel and operations remaining the same. The parent company is **Western Natural Gas Co.**, Houston, Texas.

ANNOUNCEMENT

APPOINTMENT

D. R. COOPER

Mr. Robert H. Morse III, President of The Canadian Fairbanks-Morse Company Limited, announces the appointment of Douglas R. Cooper as Manager—Machinery and Supply Division. Mr. Cooper will co-ordinate the sales and service of the Company's machinery and supply activities throughout Canada.

Mr. Cooper started his career with Fairbanks-Morse in 1925 in the Machine Tool and Supply Department of the Toronto Branch. For a number of years he was a member of the Ontario sales force and in 1940 he was appointed manager of the newly established branch at Fort William. He returned to Toronto Branch in 1945 as Manager of the Industrial Supply Department. In 1957 he was made Assistant Manager of Montreal Branch and in 1959 Manager at Halifax in charge of the Company's operations in the Maritime Provinces. Mr. Cooper is a member of the American Society of Tool Engineers and is a past chairman of the Toronto Chapter.

Will Get Potash Come High Water

Cast iron 18 ft.-diameter pipe is new weapon in fight to block off water in Saskatchewan potash area . . .

International Minerals & Chemical Corp., Skokie, Ill., is going to bring its Saskatchewan potash property into production.—by standing a 300-ft. iron tunnel on end to block off a water-loaded sand layer.

The water has been plaguing the efforts of major producers of fertilizers to get at what are believed to be the world's richest deposits of potash.

Already the first producer in the Saskatchewan potash beds has been forced to suspend production because of a heavy flow of water into its concrete shaft and underground workings.

Another U. S. firm has decided to stop its exploration program.

But International Minerals thinks it has the water problem licked.

If it's successful, there will likely be a new rush of activity in potash areas of the prairie province.

"Once we prove we can beat the water, others will come in," Dr. I. M. LeBaron, vice-president who handles engineering and development for International Minerals, told **FP**.

The technique he outlined is new to the western hemisphere although it has been used in deep mines with water problems in Europe, he explained.

It's called "tubbing."

Basically, it involves building a short underwater tunnel vertically — or standing on end.

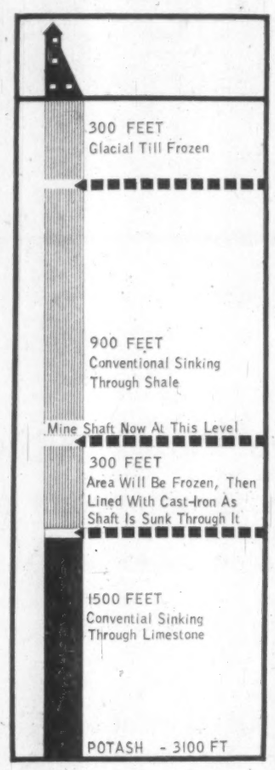
For 300 ft. through the water-laden Blairmore formation a series of 65 rings, each 5 ft. high, 18 in. thick and 18 ft. in diameter will be joined to form one continuous and water-tight cast-iron section.

This water area is being frozen to —50 deg. F. to permit installation of the rings.

It will be permitted to thaw out later, after the rings have been sealed with lead and bitumen and carefully anchored into limestone at either end of the Blairmore.

(The technique used by first producer **Potash Co. of America** consisted of freezing the ground, building a concrete shaft and then letting the ground thaw out. It is believed that the thawing process resulted in a twisting of the shaft, opening cracks and weak spots which now have to be repaired.)

The cast-iron lining is being fabricated by **John Bertram & Sons**, Dundas, Ont., and will cost $750,000.



A German firm which has installed some 160 similar linings will direct installation at the International Minerals property at Esterhazy, Sask.

It weighs 3,000 tons and fits into the 3,100 ft. shaft between the 1,200 and 1,500 ft. levels.

International Minerals has already spent some $18 million on the Esterhazy property, expects to start production at an initial rate of 1,200 tons of potash concentrates in 1961. Surface plant should be completed this fall.

The company produces potash at Carlsbad, New Mexico, expects to sell $120 million of fertilizer this year.

"We have plans for a second shaft and additions to the first," LeBaron added. "We plan to expand immediately after getting into production."

There has been increasing skepticism in Saskatchewan and elsewhere about the prospects of developing the province's big potash deposits successfully, but LeBaron is confident.

"I want to dispel any idea that we are unsure of getting this project rolling," he emphasized with a wave of his horn-rimmed glasses.

"You don't even put down drill holes without running into the unexpected.

"In my books, this is the best deposit of potash I've ever seen, and I've seen them all.

"The world's supply of potash for tomorrow is in Saskatchewan. Others will come pouring in once the techniques for getting at the deposits and mining them have been worked out.

"In the next 20 or 30 years there won't be any large world producers not mining in Saskatchewan."

The tall, tanned official of a company he says is the world's leading fertilizer producer hurried on:

"We plan to use the initial output to service markets we've already developed in the north central and eastern parts of the U. S.

"Our additional capacity, once we're rolling smoothly, will hit the Canadian market and then we'll move along the St. Lawrence Seaway to Europe and west to Vancouver and Japan."

He grinned as he added "with a proper freight rate from Saskatchewan, of course.

"Eventually we will have participation by Canadians in our operations here, but we feel that it wouldn't be fair now to shareholders of the parent company who are giving up some of the markets to get the Canadian plant on its feet," LeBaron explained.

International Minerals, he said, has been interested in Canada for 20 years.

It has owned a nepheline syenite property in the Blue Mountain region of Ontario for that time and about five years ago spent $1.5 million to bring it into production.

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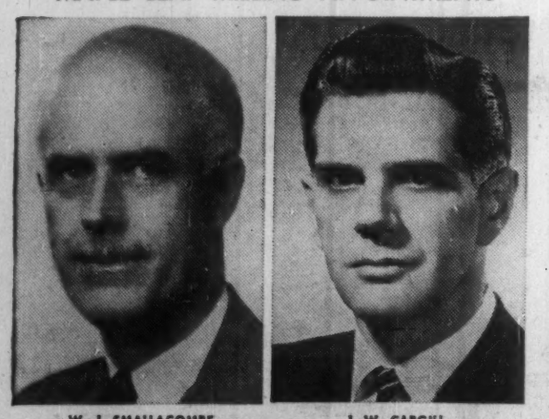
ANNOUNCEMENT

MAPLE LEAF MILLING APPOINTMENTS



W. J. SMALLACOMBE J. W. CARGILL

The Board of Directors of Maple Leaf Milling Co. Limited announce the appointment of W. J. Smallacombe as Secretary of the Company, effective February 1st, succeeding G. Harvey Hand who has retired after 30 years' service. Mr. Smallacombe has a long background of experience with the Company in senior positions, latterly as Director of Traffic.

Maple Leaf Milling Co. Limited announces the appointment of J. W. Cargill as General Traffic Manager, effective February 1st. Mr. Cargill has served in the operating and traffic departments of the Company for fourteen years. He will be responsible for all traffic activities of the Company.

Ingot Orders For Alcoa Cut By Cancellation

MONTREAL (Staff) — Canada's **Aluminium Ltd.** now has only small ingot commitments to U. S. producers, following cancellation of 59,000 tons to **Aluminum Co. of America** for 1960-61.

Alcoa will pay about $9 million this year to the Canadian firm instead of taking delivery of the metal.

This represents a fee of about 7.6c per pound of undelivered metal. (Present price of ingot in the U. S. is 26c per pound.)

Meanwhile:

- **Alcoa will take delivery** of roughly 5,000 tons of Aluminium Ltd. metal annually until 1963.
- **Another U. S. producer, Olin Mathieson Chemical Corp.,** is taking 10,000 tons a year until 1962.
- **Shipments under contract to Kaiser Aluminum & Chemical** ended in 1958.

The Alcoa cancellation, plus the small quantities yet to be delivered to Alcoa and Olin, are the tag-ends of an era in which U. S. ingot-makers purchased large quantities from Aluminium Ltd. and its operating subsidiary, **Aluminum Co. of Canada.**

Alcoa, for example, contracted to buy 600,000 tons beginning in 1953.

By 1957 there were still 435,000 tons slated for delivery to various U. S. producers up to 1961.

Since then a combination of routine shipments under contract, altered U. S. stockpiling policy, stretchouts — and now the Alcoa cancellation — have almost ended deliveries from Canada to U. S. primary producers.

U. S. ingot-makers currently are operating at substantially less than capacity, in contrast to the tight supply situation of a few years ago.

Aluminium Ltd. — which ships very large quantities to U. S. fabricators — says the Alcoa cancellation doesn't alter its production schedule of 675,000 tons of metal from Canadian smelters in 1960, compared with 520,000 tons in 1959.

FERRY CONTRACT LET

From Our Own Correspondent

FREDERICTON — A Hartland firm, **Craig's Service & Machine Shop,** has been awarded a $31,588 steel ferry contract by the N. B. public works department. The ferry will go into service between Beechwood Pond at Upper Kent and the west bank of the St. John river.

ANNOUNCEMENT

HOWARD SMITH PAPER MILLS LIMITED APPOINTMENTS

W. P. NESBITT S. J. QUATTROCCHI H. S. SPENCER D. C. CURRIE

The following appointments, effective June 1, 1960, have been announced by D. S. Abbott, president of Howard Smith Paper Mills Limited. W. P. Nesbitt, formerly Manager of the company's Cornwall Mill, has been appointed General Manager of the Pulp and Paper Division of Howard Smith Paper Mills Limited. S. J. Quattrocchi of Alliance Paper Mills Limited, a Howard Smith subsidiary, will succeed Mr. Nesbitt as Manager of the newly expanded Cornwall Mill. H. S. Spencer, presently Manager of the company's Beauharnois Mill, will succeed Mr. Quattrocchi as Vice-President of Alliance Paper Mills Limited. He will make his headquarters in Merritton, Ontario. D. C. Currie will succeed Mr. Spencer as Manager of the Beauharnois Mill. Mr. Currie was formerly Assistant Mill Manager.

U.S., Foreign Financing In Pulp Mill?

From Our Own Correspondent

EDMONTON — Proposal to build a $50 million pulp mill at Rocky Mountain House in west-central Alberta would involve Canadian and foreign capital.

Much of the senior financing may be done in the U. S., according to officials of **Alberta Pulp Mills Ltd.** Swedish capital also is reported interested.

A mill in the Red Deer area has been talked about for some years. A plant was to have been started there by Alberta Pulp Mills Ltd. in 1949 (**FP**, July 31, 1948). At that time, plans called for production of newsprint and other papers.

The present project was announced 15 months ago (**FP**, Nov. 22, 1958).

J. A. R. Choate of Red Deer, president of Alberta Pulp Mills Ltd., now says that tenders will be called within a few months on plant construction.

The plant would have production capacity of 450 tons of pulp per day.

It is scheduled to be operating late in 1961.

Principal product would be unbleached kraft. There is a possibility of corrugated box material also being made.

The company has applied to the provincial government for a lease on 3,000 sq. mi. of timber lands, along with an option on an additional area of like size.

The government has given the company the sole right of negotiation for the area involved.

Preliminary surveys of the region indicate an abundance of pulpwood, according to company spokesmen.

Aerial photographs indicated a potential 16.2 million cords of pulpwood and another two million cords of saw logs.

The plant is expected to employ 1,200.

The Rocky Mountain House area, near the junction of the Clearwater and North Saskatchewan rivers, is serviced by an all-weather paved highway, branch lines of the **CPR** and **CNR**, and a network of forestry roads through and around timber berths.

Choate is a businessman in Red Deer. Vice-president and secretary is E. Farnell, also of Red Deer.

Other directors: W. C. Fares and Arnold Tuer, both of Calgary; H. O. Patriquin, Gordon McNab and Gordon Thompson, all of Edmonton; W. R. Sandquist and G. M. Hayhoe, both of Red Deer; E. Holroyd, of Rocky Mountain House.

a 10 minute meeting?...

Sounds incredible. Certainly it took the office help by surprise but facts are facts —the BIG meeting lasted just ten minutes!

They'd been pointing to this meeting for weeks . . . the hair-down fight when they'd decide who was going to get *the* contract. But what an anti-climax when all members came to the battleground with the same company in mind.

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STRUCTURAL STEEL MACHINERY ELECTRIC MOTORS TRACK MAINTENANCE EQUIPMENT CAST IRON PIPE CONCRETE PRESSURE PIPE C12R

A Report

On September 12th, 1959, Weekend Magazine started publication of Perspectives, its French-language edition. This simultaneous publishing of articles by, about, and for Canadians was a bold step. Here is what happened.

Four leading daily newspapers of the Province of Quebec joined in this venture—Le Soleil in Québec, La Tribune in Sherbrooke, Le Nouvelliste in Trois-Rivières and La Voix de l'Est in Granby. All these newspapers report increased circulation for their Saturday editions. All report enthusiastic reception by their readers with one paper receiving over one thousand letters of commendation.

The net paid circulation for October to December 1959 of Perspectives, as audited by Clarkson Gordon & Co., averaged 206,224.

Linage for the period September 12th, 1959, to December 31st, 1959, averaged 13,000 lines per issue. Total gross investment by advertisers during this period exceeded $275,000. A remarkable vote of confidence in a new publication. Even at this early date in 1960, reservations indicate that the average linage per issue in 1960 will exceed 1959.

These facts and figures are reported here because of the interest shown in the progress of Perspectives. They reaffirm the decision to bring to the readers and advertisers of Canada a national magazine, published in our two languages, English and French.

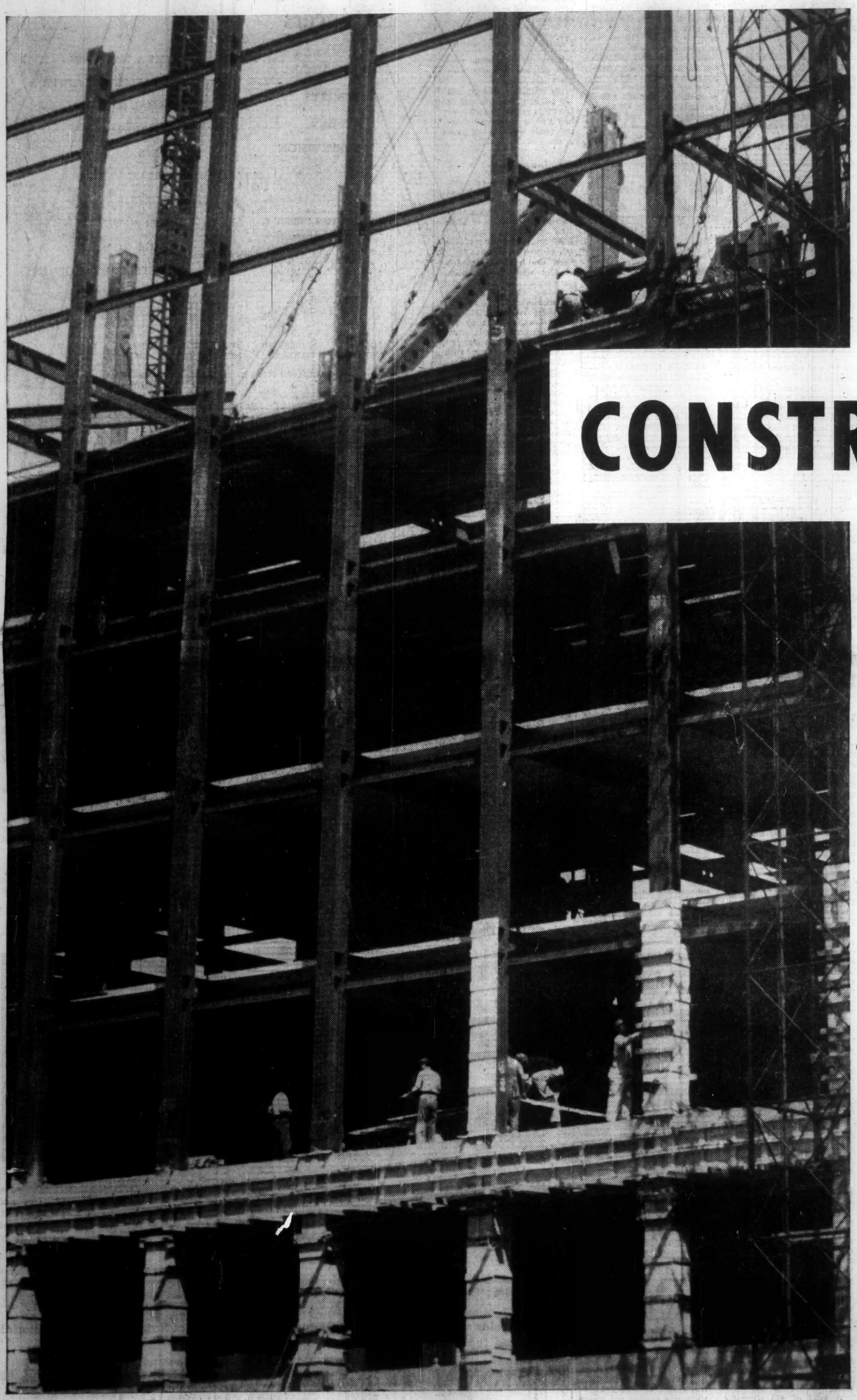
the biggest single selling force in Canada

Weekend MAGAZINE / AND ITS FRENCH LANGUAGE EDITION **Perspectives**

Weekend Magazine has also reached a new high in circulation, with an audited figure of 1,619,897, for the period October to December, 1959. The combined circulation of Weekend Magazine and Perspectives is now 1,826,121, every week.

The Financial Post

Vol. LIV | Member of Audit Bureau of Circulations | Publication Office: Toronto, February 20, 1960 | Twenty-five Cents an issue, Eight Dollars a Year | No. 8



CONSTRUCTION

a feature report

Canada's construction industry, after a series of record-breaking years since World War II, is headed for its biggest year yet. The $7,500 million value expected in 1960 means more physical work put in place than in any previous year.

Employing some 600,000 workers and providing off-site work for a probable 600,000 more, the construction industry represents over 22% of this country's gross national product. In 1960, gains will come in commercial, institutional and industrial building. Even the reduced housing program expected still represents a substantial portion of total value. With growing population ahead, hospitalization plans and more school children, institutional building is going to assume an increasingly significant place in the construction economy. Ahead, too, a probable $500-million splurge in pipeline construction and development over the next few years if Ottawa approves exports of natural gas.

At the same time, fierce competition is forcing construction men to examine their operations closely to reduce costs and maintain profit margins. In the decade ahead, more local medium-sized firms will look for work on a provincial and nation-wide basis. But, more and more, too, Canadian construction men will have their eyes on far horizons as they range the world market.

In spite of occasional soft spots, it all adds up to unprecedented growth for the industry at home as it paces the country's expansion and increasing prestige and business for Canadian construction firms abroad.

Highway Construction Levels Off

Around $1,157 million will be spent this year on construction and maintenance of highways, roads and streets in Canada.

New highways will not increase at the rate established in the postwar years, but road programs across the country will ensure a high level of activity.

Retrenchment by governments and the "tight money" will not allow any big new plans for new construction. Rather, what money is available will be earmarked for essential work.

There are indications that highway expenditure, at least in the short term, is entering a period of readjustment.

Canadian Good Roads Association, spokesman for the highways and roads agency in Canada, feels these are the reasons for an adjustment period:

- **Current budget total** is the peak of the steady upward trend of road spending since World War II.

The increase of 6.9% this year, however, is well below the rate of increase recorded during those years.

Two factors may be responsible for this apparent leveling off in the rate of increase:

- **Completion of large capital expenditure** on toll facilities.
- **A leveling off in expenditure** on intercity highways, which have been undergoing visible improvement during the past few years.

Several of Canada's biggest roadbuilders indicate that all the frills will go but the basic structure of highway development will be left intact.

For this year, at least, highway budgets will enable the provinces to continue with existing long - range plans for road and street improvement.

The tenor of federal government economic thought would suggest that the expansion in federal government road outlay of recent years will come to a halt this year.

The pressure still seems to bear most heavily on local governments.

While intercity highway construction keeps well abreast of motor vehicle registrations, municipal governments find themselves in a steadily tightening strangle-hold of urban traffic. Their already grave difficulties will be exacerbated this year by the addition of tight money.

Generally speaking, weather in 1959 was unfavorable for highway construction. Serious disruptions of construction programs occurred in many parts of the nation.

There has been, in consequence, a considerable carry-over of construction into the current year. This fact alone should blunt the edge of the economy axe.

One gratifying fact is noted by the Canadian Good Roads Association from recent experience: the peaks and valleys of construction budgets that obtained a decade and more ago have been substantially ironed out by long-term planning which most governments have now adopted.

Foresight on the part of Canada's various governments and industry, minimized the effect of the U. S. steel strike.

Steel work on bridges was most affected and, in Manitoba and Nova Scotia, work on three bridges was held up while only one bridge was delayed in New Brunswick.

At the time the Trans-Canada Highway agreements with the federal government originally were to expire, at the end of 1960, only two gaps are expected to be unfinished.

While the British Columbia government predicts completion of its section of the highway, 560 mi., the 87-mi. gap from Revelstoke to Golden, which runs through the national park in the province, will not be completed. Snow avalanches and unexpected rock excavation problems have slowed down the timetable.

The other gap is the Agwa to Marathon stretch north of Lake Superior which may, perhaps, be finished if weather, construction supplies and labor conditions are favorable during all the next construction season.

Here's a rundown on the provinces:

British Columbia

The total volume of road construction completed this year in British Columbia did not reflect the yearly increases evident in the industry since 1951-52. Much time was lost because of strikes and forest closures.

On the planning boards for next year is the surveying of a new road from Squamish to Pemberton, which will eventually be projected to Prince George. The road will follow the general route of the government-owned **Pacific Great Eastern Railway.**

It is not expected that the department's 1960-61 budget will be less than last year's $74.2 million.

Alberta

The prime factor influencing construction last year in Alberta was unusually wet weather. This resulted in loss of three times the number of shifts compared with the previous year and resulted in a corresponding decrease in percentage of work completed.

Of the total proposed work, the difference in percentage as between 1958-59 and 1959-60 on grading was 17%; base course was 17%; plant mix was 7% and portland cement concrete 12%.

All the department of highways contracts will be completed in the forthcoming year, it is expected. The 1960-61 program will be as large as the preceding year's but will include the balance of last year's projects.

Saskatchewan

As in other parts of the country, adverse weather forced a readjustment of highway construction plans in Saskatchewan.

It is expected that the Department of Highways and Transportation will be from 5 to 10% short of original objectives for the year ending March 31.

The current program is somewhat bigger than that for 1958-59 but it is expected that the results for the two years will be roughly comparable.

Steel shortages did not materially affect construction but there were some minor delays.

Manitoba

The program of the Department of Public Works in Manitoba planned for 1959-60 provided for the largest expenditure in the province's history. However, early spring conditions and adverse weather, especially from the middle of September on, were responsible for the incompletion of many miles of highway that under normal conditions would have been fully constructed.

Expenditure on provincial trunk highways and main highways, including the Trans - Canada Highway, amounted to $20.8 million for 1958-59.

It is anticipated that expenditure for the current fiscal year 1959-60 will exceed that of the previous year by several million dollars despite abnormal weather conditions.

Approximately 65% of the over-all program for 1959-60 has been completed. The incomplete portion of approximately 35% will be carried over into 1960-61.

Although the construction season was abnormal climatically, the amount of work completed during 1959 - 60 was appreciably greater than that in previous years.

Steel shortages have not, in general, affected the over-all highway program in Manitoba but have seriously delayed progress on at least three major structures.

Ontario

Volume of highway work completed by the Department of Highways of Ontario compares favorably with that completed in 1958. Gross expenditure by the department will be close to the 1959-60 estimate of $273 million.

Weather conditions were favorable in Ontario throughout the year with the exception of some wet weather in the autumn months.

The province's work on the Trans-Canada Highway and on the trans-provincial controlled-access Highway 401 progressed according to schedule.

A total of 478 contracts were completed by the department in the past construction year, of which 308 were for capital expenditure and 170 for maintenance.

Work completed included 650 mi. of grading, 479 mi. of hot mix paving, 54.6 mi. of concrete paving, 118 mi. of resurfacing and 73 structures.

Some of this work had been started and partially completed in previous years.

During the current fiscal year the department called contracts for nearly 700 mi. of grading, culverts and granular base, 529 mi. of hot mix paving, 24 mi. of concrete paving and 95 structures.

At April 1, 1959, the department's carryover of work totaled $76 million. It is anticipated that carryover in the current year will be slightly lower at the end of the current fiscal year.

Construction work was not seriously affected by steel shortage but the full effect of these shortages may not be known until the forthcoming construction year.

Quebec

First indications from the province of Quebec are that normal highway construction volume in the current year will approximate that for previous years.

The completion of major capital projects, notably the Montreal - Laurentian toll road, will probably mean that the province's over-all outlay on highways and streets will be down somewhat from the preceding years.

Construction programs in the province will be concentrated on improving existing services and in bringing intercity highways up to standard.

The government recently announced that it would soon do something about "suicide stretch", the section of highway between St. Hyacinthe and St. Hubert where fatal accidents have been numerous.

The province's road department had previously committed itself to widening to four lanes the section between St. Hubert and Beloeil.

The section from Beloeil to St. Hyacinthe was slated to be finished this year.

The four-lane section may be extended to Drummondville.

Nova Scotia

The Department of Highways was not able to complete its entire program for 1959-60. Approximate completions were: grading, 85% and paving, 88%.

Weather conditions throughout Nova Scotia were unfavorable during the entire construction season. Approximate volume of construction work in 1958-59 was $18 million, compared with $21 million in 1959-60.

Steel shortages affected construction on three major bridges in the province.

New Brunswick

Despite unfavorable weather conditions during the year the Department of Public Works of New Brunswick had a good road construction year. The department was able to complete practically all work planned.

Steel shortages did not create much difficulty, with the exception of delaying building of steel superstructures on the bridge across the Madawaska.

The total roadbuilding program of the department was up slightly over 1958-59.

Last year's activities by New Brunswick added 250 mi. to the province's 2,941 mi. of hard-surfaced roads.

During the past year paving, recapping, surfacing, seal coating and grading and graveling of 857 mi. of main trunk and secondary highways was carried out under contract, county projects and by public works crews.

At the end of the year the province's highways system consisted of 3,200 mi. of hard-surfaced and 9,832 mi. of graveled roads.

Prince Edward Island

Prince Edward Island carried out an extensive program last year.

It's estimated that around 100 mi. of new roads will be built this year, of which over half will be in the cost-sharing roads to resources program.

Newfoundland

Newfoundland estimates for current year aren't out yet but province has under way a four-year program involving construction of some 1,200 mi., reconstruction of 1,700 mi., and paving of 600 mi. of provincial roads.

Of the total of Canada's current road expenditure, provincial governments are spending 62.5%; municipal governments, 25.8% and the federal government, 11.7%.

Total expenditure by the three governments is equal to $66 per capita for all Canadians, compared with $63 in the preceding year.

What effect the hold-the-line policy of the federal government will have upon roadbuilding activities of the senior authority remains to be seen. In recent years there has been a sharp increase in federal highway activities.

In the current year, expenditure of the federal government is forecast by the Canadian Good Roads Association at $136.3 million, against $109.6 million in the previous year. This is an increase of $26.7 million, or 19.6%.

Canadian municipalities will spend $298 million in the present fiscal year, CGRA estimates. This compares with $274 million in 1958.

Local governments, it is expected, will have more difficulty in a tight money period than the provinces and federal government. The current difficulty in financing capital projects on the money markets most certainly will have a depressing effect upon municipal roadbuilding.

The major municipalities, however, have shown little disposition to date to cut back on long-range programs.

How Road Bill Climbs

	*1959	1958	1957
		$ millions	
Hard surfaced highways, etc.	438.3	405.2	361.8
Gravel, stone roads, etc.	227.6	222.2	210.8
Dirt roads, etc.	62.0	53.4	57.8
Grading, scraping, etc.	11.2	11.3	29.3
Sidewalks, paths	21.8	22.2	17.6
Aerodromes, runways, etc.	40.0	35.3	31.6
Bridges, overpasses, etc.	198.6	218.9	168.1
Tunnels and subways	22.1	40.1	53.7
Park systems, landscaping, etc.	13.7	13.9	6.4
Fences, snowsheds, etc.	17.2	16.8	18.8
TOTAL	1,052.5	1,039.3	955.9

*Preliminary estimates for work done.
Source: DBS.

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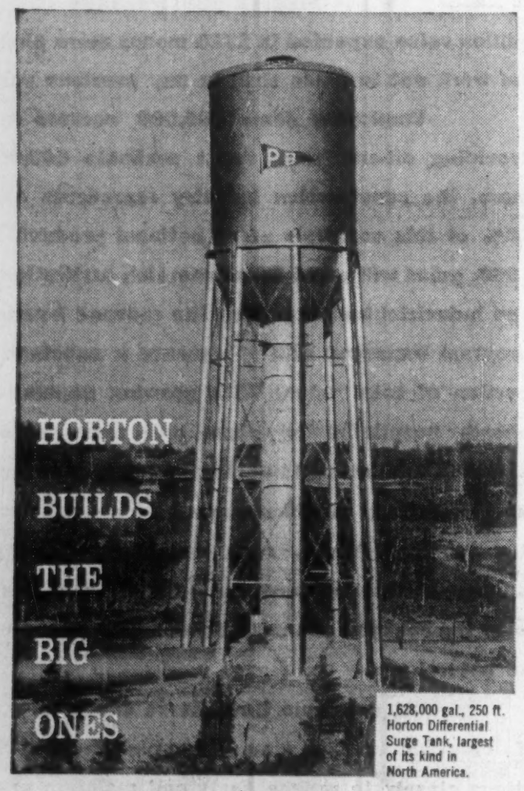

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Grand Award Winner, Engineered Buildings Ltd., integrates advertising and sales.

Engineered Buildings Ltd., which last year built and sold more than 1,000 houses throughout Western Canada, made a detailed study of what it needed in a merchandising program.

"We advertise quality not just for the sake of quality but for all the things that a quality home means . . . excitement pleasure, love, family, unity, sheer pride and the satisfaction of 'having arrived' at that point in life when you can afford to own an Engineered Home.

"Clearly we needed a different drum to beat in order to be heard above the others," the firm stated.

"All our advertising and sales endeavours (for they are one and the same) are by-products of a sound basic philosophy which has conclusively proven itself in sales — we call it 'The Heart Sell' — and it works."

Richard A. Locke, Vice-President, Engineered Buildings Ltd., (left) received Grand Award Trophy from A. D. Wilson of CMHC. Mr. Locke also received a plaque as winner of Division C (over fifty houses built and sold).

Tricon Ltd., Division A Winner, makes most of a limited ad budget.

This statement comes from Tricon Ltd., winner of Division A category (one to fifteen houses built and sold) and it highlights a good example of how a small volume builder can merchandise effectively.

"Although we are still in the experimental stage as far as our advertising goes, we feel that during 1959 we have managed to carry a single theme through to a satisfactory conclusion."

"We feel the campaign was quite successful and we are planning on doubling our house sales in 1960. Tricon Ltd. is a company only two years old and we feel that our advertising has provided the stepping stone for our present rapid growth."

David Parker, General Manager of Tricon Ltd., accepts Division A plaque from Clifford Fowke, editor of National Builder.

The ultimate criterion of a successful merchandising campaign is results. Every one of the top ten entries in all divisions of the contest has an enviable sales record — the payoff from a belief in and good use of advertising. In the opinion of the judges, however, in almost every case there was room for improvement—the opportunity to make good sales records even better.

The purpose of this annual contest is to improve the quality of merchandising programs for every builder in Canada — no matter what his present volume of business. By examining the best — and by pointing out certain weaknesses — National Builder provides an invaluable service for both builders and manufacturers. The number of excellent entries in the first year indicates the high level of interest in merchandising among residential builders.

This is only one of the many services National Builder performs in creating more sales through better market conditions for Canada's builders.

Plan a regular schedule of advertising and take advantage of National Builder's editorial vitality and reader response.

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$7.5 Billion Construction Boom

Industrial, commercial building will set the pace in 1960 . . .

By FORBES GILBERTSON

With the economy booming, total value of construction in Canada this year could reach $7,500 million.

This figure is accounted for to some degree by increased costs but actual volume of physical work put in place, too, is expected to show an increase over 1959 and 1958.

Last year, which started slowly and picked up impetus in mid-year, is still expected to reach the $7,300 million mark when all the figures are in, surpassing 1958.

There's controversy among construction men themselves as to whether 1960 will mean a $7,500 value in construction but the most pessimistic viewpoint still estimates a minimum value of over $7,300 million.

These factors make the $7,500 million figure a probability:

- **Industrial should be up at least 5%** over last year.
- **Commercial, up from 10% to 12%.**
- **Institutional, at least 10% up.**

Experts predict the 1960 breakdown will look something like this:

- **Business,** $3,300 million.
- **Housing,** $2,000 million.
- **Institutional,** around $600 million.
- **Government spending,** about $1,600 million.

While housing starts are still figured at around 125,000, this is still a substantial program and, plus alterations, repair work, etc., a carryover into 1960 of around 80,000.

A $2,000 million figure for housing is a reasonable figure.

If the present hearings on exports of natural gas end favorably, it would mean substantial spurt in pipeline construction this year. Over the next five years, it could **mean a $500 million development** and construction program.

Another boost could come from starts on a dozen major development projects as a result of studies made last year.

The expected upswing in industrial could well be larger even than expected as plant owners who put off expansion or construction of new plants in 1958 and 1959 now launch their programs.

Its impact is expected to be felt strongly in the most highly industrialized province, Ontario, and especially in mid-central Ontario.

Consulting engineers report many major projects on the drawing boards now for construction in 1960 and at least one major consulting engineer in Toronto predicted that this year would be the busiest yet in design of industrial and commercial buildings for his profesion.

Commercial building will be sparked by expansion by chain stores, shopping centres and office buildings.

Today's tenants expect air conditioning and all the other luxuries in office buildings and this, plus new firms coming into Canada or forming here, will help spur construction of new buildings and extensive remodelling of older ones.

Institutional building is going to assume an increasingly significant slice of the construction pie in the coming years.

With high school and public school children expected to number 2.3 million by 1976 in Ontario alone — a gain of one million from 1960 — plus widespread hospitalization plans, tremendous expenditures are going to be needed across the country for schools, universities, and hospitals.

The past month has shown healthy gains in construction awards over January, 1959, right across the country — probably around 20%—which augurs well for another record year ahead.

$2 Billion Big Jobs

HERE'S THE VALUE OF MAJOR BUILDING WORK IN CANADA:

	*1959	1958	1957
		$ millions	
Factories, etc	298.9	305.7	443.1
Mine buildings, etc.	34.1	46.1	127.8
Railway stations, etc.	27.5	23.4	22.7
Warehouses, etc.	82.7	77.4	90.9
Grain elevators	23.7	22.2	19.8
Hotels, etc.	48.0	49.3	67.4
Office buildings	327.4	292.8	223.7
Stores	211.6	185.5	165.3
Garages, etc.	62.3	52.3	59.3
Theatres, etc.	26.8	26.3	27.7
Schools, etc.	307.5	290.4	285.0
Churches, etc.	48.0	57.3	48.7
Hospitals	179.0	143.0	136.7
Other institutional buildings	50.0	42.7	48.9
Farm buildings	161.6	157.7	146.8
Broadcasting, etc.	56.9	44.4	53.1
Aircraft hangars	29.6	10.0	12.2
Passenger terminals, air, bus, boat	23.3	21.6	7.7
Armouries, barracks, etc.	17.7	17.2	27.2
Bunkhouses, etc.	14.6	12.8	22.2
TOTAL	2,031.2	1,878.1	2,036.2

*Preliminary estimates for work done.

Source: DBS.

Substantial boosts, such as a good start in pipeline construction this year, could push the grand total to slightly beyond the $7,500 million mark.

A quick summary of the outlook by provinces:

- **British Columbia:** Total volume of work should be at a satisfactory level and a little better than last year. Construction costs are expected to be up from 3%-5%.

B. C. builders blame labor disputes last year for a slowing in capital expenditures in the province but don't expect any cutback for this reason in 1960.

However, the industry there is suffering from overexpansion due to earlier boom conditions. There's a surplus of contractors for the volume of work on hand and new firms keep coming into the field.

But, while 1960 is expected to be a good if unspectacular year, from 1961 onward a real boom in construction should quickly absorb any surplus capacity.

While not likely to be a factor in 1960, the proposed Columbia and Peace River power developments will provide millions of dollars worth of construction work for B. C.'s construction industry in the next few years.

- **Alberta:** Final figures for 1959 are expected to be a little better than 1958 and this year road building and engineering should hold at 1959 levels or be slightly better.

General building, too, should improve, with gains in commercial and industrial construction and institutional staying at a high level.

- **Saskatchewan:** Grand total of around $375 million estimated for 1959 will be only a shade under 1958.

All construction except housing is expected to increase substantially in 1960, with the biggest boost due to the South Saskatchewan River dam project and Squaw River Rapid power site.

- **Manitoba:** When final figures are completed, 1959 volume is expected to exceed 1958 and 1960 will be another good year of comparable volume.

Residential, commercial, industrial are expected to maintain high levels, with boosts in engineering.

All in all, 1960 may exceed 1959 in value and volume.

- **Ontario:** May be headed for its biggest construction year yet, with new year kicking off to a vigorous start and auguring well for all categories except residential.

Canada's largest industrial province, it should show the biggest gains in anticipated general industrial building splurge in 1960.

Central Ontario particularly, including Toronto, should get the most benefit from industrial and commercial construction.

Construction should also run at high levels in the Windsor, Sarnia, London, western Ontario and Ottawa Valley regions.

Consulting engineers in Toronto report business brisk and indications are that this may be their busiest year yet for work in the province.

Institutional work, too, is going to assume more and more significance in the province in the coming years. The additional one million children are expected to bring total in the province's elementary and secondary schools to around 2.3 million by 1976 and university enrolment, now around 26,000, is headed for a 90,000 figure by then.

- **Quebec:** No spectacular changes are anticipated for the Quebec construction picture.

This year is regarded as a year of solidification for new records in the coming 10 years.

The 1959 total was expected to be down from 1958 when final figures are in from DBS later this year.

This year should be as good as 1959, with a decline in municipal spending, a brisk commercial and industrial construction, and a strong program of institutional building, with roads and highways construction maintained at a good level.

- **New Brunswick:** Highway construction will run at last year's levels, with institutional building holding steady.

There will be gains in engineering and a drop in major public, semi-private and private construction.

- **Nova Scotia:** Last year's final figures are expected to show substantial gains over the estimated 1958 total of around $170 million.

Further gains are expected in 1960.

- **Newfoundland's** 1960 outlook is generally considered good and should compare favorably with an estimated $30-plus million spent on construction in 1959.
- **Prince Edward Island,** too, with an increase in 1959 of around $5 million expected over the 1958 figure of $25 million, is expected to show an over-all gain in 1960.

Since the end of World War II, Canada's construction industry has grown vigorously, setting new records every year.

It now represents about 22% of Canada's gross national product, employs some 600,000 people and probably provides work for another 600,000 in offsite operations.

Developments such as the Peace River and Columbia power projects will provide millions of dollars worth of construction work in the next few years.

This year, and in the immediate future, the trends are these:

For 1960, construction costs generally should remain relatively stable. Fierce competition and a capacity exceeding the amount of work available, will have a strong influence on prices.

Construction materials generally will hold the line price-wise in spite of the fact

(Continued on page 52)

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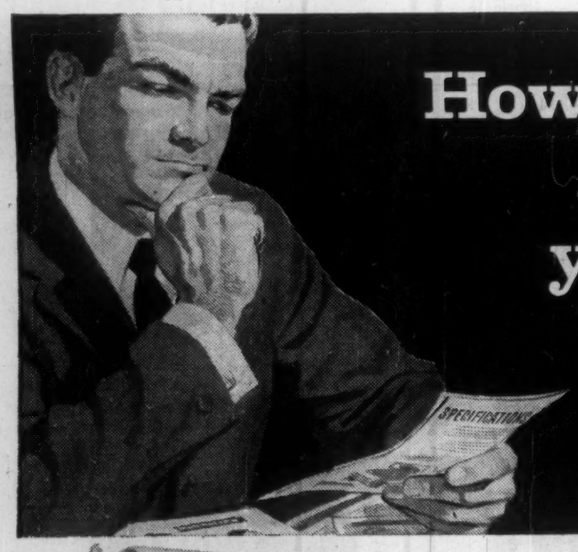

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Building Industry Set for Boom Year

(CONTINUED FROM P. 51)

that higher wages and production costs are troubling manufacturers.

Wages in the industry, on the increase in recent years, will increase this year due to built-in wage increases in contracts negotiated, for the most part, last year. But again, competition will force contractors to absorb the extra cost wherever possible.

While tight money has hurt housing starts and will do so even more this year, it has affected other types of building, too.

In spite of this, owners of commercial buildings in particular are willingly paying high mortgage rates.

For sound propositions handled by reputable companies, the money is there.

In multi-story office buildings, there's usually no problem in finding financing if the owner can show the bank that he has reliable tenants already lined up for a good percentage of the space. But, if he hasn't a substantial proportion already rented, he's told to come back when he has.

The availability of money depends too, to some extent, on location and the potential growth of the area in which he wishes to locate.

The toughest problem facing Canada's contractors in 1960 is the poor profit picture.

For one thing, there's the simple fact that there are too many firms for the amount of work right now.

New firms are coming into the field all the time, too, for unlike many industries, it requires no great capital outlay for equipment, etc., to break into the construction field.

Price-cutting has gotten out of hand and too many firms are figuring too many jobs knowing they'll lose money.

Some of them do this to hold their highly trained staffs for the more profitable jobs which come along. Others make break-even bids for the same reason.

There's no relief in sight this year from this poor profit outlook but many well-established firms are turning in legitimate bids aimed at making a profit and weathering the storm rather than put in bad bids.

While there were fewer business failures among construction firms last year than in 1958, the amounts of money involved in these failures were higher.

In 1959, too, about 30% of contractors lost money. For a boom industry, this is considered pretty high.

But some of these failures, at least, can be attributed to just plain bad management and even more to poor estimating.

Immediate past president of the Canadian Construction Association, J. Eric Harrington, sounded the keynote for this year of reassessment when he said recently that the industry:

"Must develop imagination and vision in devising and using new equipment that will save time and money. We must increase the tempo in the field of research and in employment of trained personnel, including graduate engineers, even by the smallest construction companies."

Increased efficiency and a sensible approach to bidding procedures are needed to get firms back in the profit picture.

In line with Mr. Harrington's call for greater efficiency in the industry, here are other trends which point to a boom in the coming years:

- **To offset high labor costs** and save time, there will be more and more off-site construction in every phase of building, plus increasing use of panels, curtain wall, etc., and new materials designed to reduce labor costs and time consumed.

- **Machinery to speed up** construction and handle construction materials are going to increase in variety, size and efficiency and old ones will have new refinements.

This off-site construction is going to be felt most quickly and extensively in housing.

There will be more emphasis on the builder as land assembler, manager and salesman, with an increasing number of house components being fabricated off-site, initially, by his own staff and brought together in the housing development for final erection.

But later on, it will also mean more new firms specializing in fabrication of these components.

J. M. Soules, president of CCA, told **FP** that off-site construction and prefabrication in the housing field especially hasn't even started yet.

"This is one area where prefabrication is really going to boom rapidly," he said.

In line with this, there will be a real boom in completely factory-engineered homes by such firms as **Halliday's, Colonial Homes** and **Cardinal Homes.**

Builders will assemble their land, select the models they want and assemble the completely-prefabricated homes with their own construction crews.

There's small but vigorous movement in this direction already.

In the coming years, factory-engineered homes are going to get an increasingly large slice of the housing market.

It all boils down to this: The builder, no matter what his specialty, is going to have to take a hard look at his operation today or next year he may be working for someone else who did.

In the face of stiff competition, he's going to have to take every advantage from the latest building techniques and the best brains he can hire.

Surprisingly enough in Canada, a substantial amount of building is not architecturally designed and the future should see more and more architecturally-controlled buildings.

Package deals are going to boom: Where the owner only has to rely on one firm to find the land, erect the building and handle all associated operations.

Builders who are enthusiastic about this type of operation claim it means better profit at a better price, better competitive opportunities, a better chance for them to grow — and the client only has one man to deal with.

Smaller and medium firms, which were only local in operation, are spreading their wings and hunting for work on a provincial and national basis.

This makes it tougher for the established, larger firms and sometimes means lost money for buyers of construction who deal with fly-by-nighters.

One result of insufficient work to match capacity and tougher competition, is that more and more major Canadian firms are looking abroad for construction possibilities.

A relatively few are now engaged in overseas projects in India, Pakistan, South America, British West Indies, to mention only a few countries.

But at least 25 other large firms are now taking a close look at construction projects abroad. The 1960s will see more and more of them moving into the world construction market. With building experience second to none, Canadian builders will get an increasingly large slice of foreign work available.

At home, construction men are taking a new look at labor relations.

The next few years will see much closer working co-operation, intensive educational programs in labor law and policies, pressure on governments for stiffer labor laws.

By stiffer labor laws, construction men mean they want clarification and closer definition of the legality or illegality of various types of picketing and strikes.

There's a vital need for education. The simple truth is that all too many construction managements, particularly in small firms, don't really know their own rights, in order to push work ahead are sometimes fearful of exerting them.

Too often, comparative amateurs sit down to negotiate with full-time professionals.

Some Canadian construction firms have formed U. S. subsidiaries, especially in border areas, to drum up more business. Other firms will probably follow suit.

One thing which construction men and all roadbuilding agencies will probably press for this year — a national highway policy for Canada.

Such a policy, as explained recently by Mr. Harrington, would mean establishment of a national highways organization to co-ordinate the planning, financing and construction of roads in a national system.

It's felt that now is the time for a federal-provincial body to be organized to do this.

The benefit: Substantial economies to be gained by long-term planning. A co-ordinated program would be instrumental in bringing about real savings on a national scale.

A final note on the outlook for 1960:

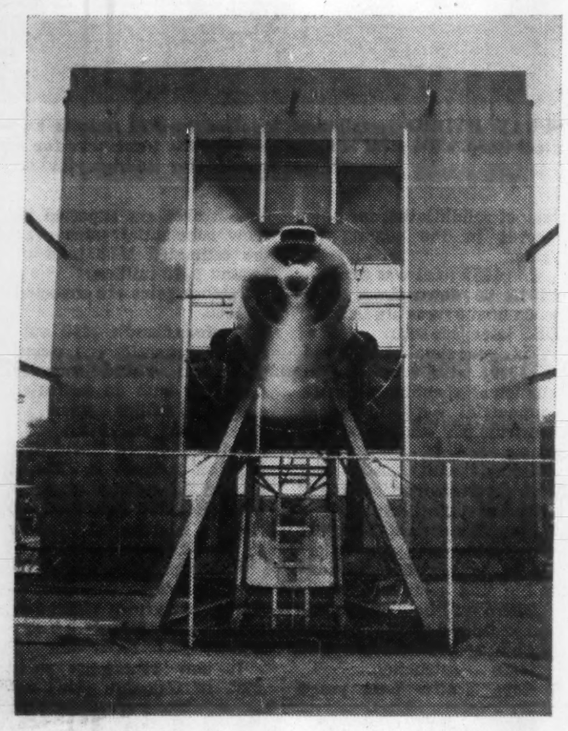
Consulting engineering firms and contractors report a significant flurry of calls for prices, particularly on industrial work.

This, combined with a significant jump in January of this year over the same month last year in construction contracts, promises a record-breaking year for Canada's construction industry.

Marine Work Millions

	*1959	1958	1957
		$ millions	
Docks, wharves	64.6	54.5	43.1
Retaining walls, etc.	1.0	3.3	2.1
Canals and waterways	9.4	30.5	73.8
Dredging, pile driving	38.9	65.0	20.9
Dyke construction	0.1	0.1	1.4
Logging booms	1.1	1.0	1.8
Other marine work	4.4	1.9	15.0
TOTAL	119.5	156.3	158.1

*Preliminary estimates for work done.
Source: DBS.



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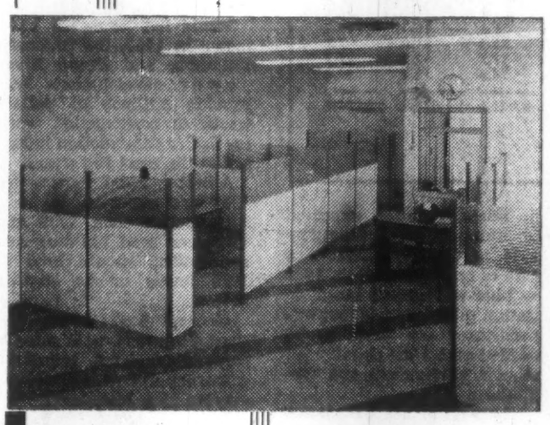

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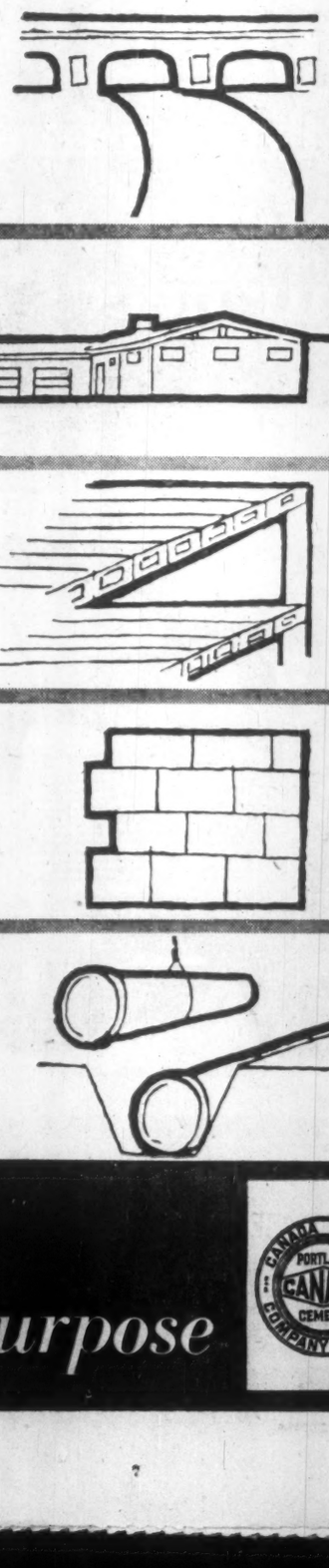

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Wage Rates for Eight Building Trades in 12 Cities, Dec. 1, 1949, 1958, 1959
(As reported by local Builders' Exchanges)

CITY	Labor			Carpenter			Bricklayer			Electrician			Plumber			Painter			Plasterer			Sheet Metal		
	1949	1958	1959	1949	1958	1959	1949	1958	1959	1949	1958	1959	1949	1958	1959	1949	1958	1959	1949	1958	1959	1949	1958	1959
Halifax	.81	1.37	1.41	1.23	1.90½	1.95	1.44	2.16	2.21	1.33	2.01	2.06	1.30	2.02	2.11	1.07	1.66	1.70	1.35	1.98	2.25	1.13	1.77	1.84
Saint John	.65	1.00	1.10	1.10	1.75	1.82	1.45	2.00	2.05	1.10	1.75	2.00	1.25	1.80	1.80	1.00	1.60	1.65	1.45	2.00	2.05	1.20	1.55	1.55
Quebec	.75	1.40	1.48	1.10	1.80	1.88	1.30	2.00	2.08	1.10	1.90	1.95	1.10	1.90	1.95	1.05	1.70	1.78	1.30	2.00	2.08	1.10	1.80	1.88
Montreal	.80	1.50	1.65	1.25	2.10	2.25	1.40-1.75	2.30	2.45	1.35	2.20	2.35	1.55	2.32	2.47	1.15	2.00	2.15	1.40-1.50	2.35	2.50	1.25	2.10	2.25
Ottawa	.70	1.30	1.40	1.30	2.15	2.25	1.65	2.40	2.50	1.50	2.42 (c)	2.52 (c)	1.60	2.55	2.70	1.00	1.75	1.75	1.50	2.15	2.25	1.47	2.45	2.60
Toronto	.95	1.70	1.85	1.60	2.65	2.80	1.80	2.95	3.00	1.75	3.00	3.30	1.75	2.89 (f)	3.20 (f)	1.35	2.27	2.41	1.90	2.80 (d)	3.00 (d)	1.75	2.80 (e)	3.15 (e)
Hamilton	.85	1.55	1.75	1.50	2.50	2.50 (b)	1.70	2.70	2.85	1.55	2.85	3.20	1.60	2.70	2.90	1.20	2.05	2.15	1.70	2.60 (d)	2.75 (d)	1.55	2.50 (e)	2.70 (e)
Windsor	1.10	1.86	1.96	1.60	2.50	2.60	1.75	2.67½	2.78	1.75	2.60	2.90 (e)	1.75	2.70	3.00	1.25-1.35	1.98	2.03	1.65	2.53	2.53 (a)	1.60	2.50	2.90
Winnipeg	.75-.85	1.45	1.55	1.40	2.30	2.40	1.60	2.40 (e)	2.50 (e)	1.40	2.55	2.65	1.55	2.60	2.70	1.20	2.00	2.10 (a)	1.60	2.50	2.60	1.10	2.30	2.35
Regina	.75	1.45	1.51	1.45	2.13	2.19	1.70	2.44	2.50	1.50	2.34 (g)	2.40 (g)	1.55	2.35	2.45	1.20	1.88	2.00	1.65	2.40	2.40	1.35	2.16	2.28
Edmonton	.95	1.60	1.70	1.47½	2.35	2.45	1.80	2.60	2.70	1.60	2.65	2.75	1.60	2.35 (b)	2.70	1.25	2.00	2.00	1.85	2.50	2.60	1.55	2.60	2.70
Vancouver	1.15	1.95	2.07 (c)	1.60	2.68	2.92	1.80	2.75	2.87	1.70	3.10 (d)	3.19 (c)	1.70	2.90 (c)	3.02 (c)	1.40	2.60	2.70	1.75	2.70 (e)	2.85 (e)	1.20	2.75	2.87

(a) Expires (b) Strike (c) Plus 7c per hr. Welfare (d) Plus 8c per hr. Welfare (e) Plus 10c per hr. Welfare (f) Includes 6c per hr. Welfare (g) Plus 3% Pension Plan
Source: Canadian Construction Association.

Jos. A. Likely Ltd.

Jos. A. Likely Ltd., Saint John, N.B., is engaged in the manufacture of concrete and timber products. Company opened a new plant in East Saint John in 1958, expanding the operation conducted on Rothesay Ave.

Concrete products include ready - mix, pre - stressed beams, pipes, poles, vaults and septic tanks. A new testing laboratory is operated at the plant site.

Company also operates as a lumber agent, with a plant for preparing creosoted wood in lengths up to 100 ft. It has a lumber mill with a prefabricating plant.

Company has its own railway sidings at the Rothesay Ave. and East Saint John plants.

It imports heavy timber from British Columbia via Panama, and fills orders through Eastern Canada.

Officers of the firm are grandsons of the founder. They are Jos. A. Likely, president; Richard G. Likely, vice - president; Robert G. Likely, secretary, and L. Herbert Likely, treasurer.

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Labor Gains 2% to 8% Will Keep Pressure On

Construction labor tacked on gains ranging from 2% to 8% in past year.

And the pressure for more is not likely to let up in 1960.

- **Several contracts** have 1960 hikes built into them.
- **Sparked by U. S. steel settlement** and industrial recovery, labor looks for fatter pay packets now. The building trades will be pushing hard too.

Across the bargaining tables, they expect to face cost-conscious managements.

One result of the all-round tougher attitude was strike of 850 carpenters in Hamilton.

The walkout, starting in mid - November, eventually tied up $25 million worth of construction projects in the city and district.

Unlike the massive tie-up of construction in Toronto the previous year, the Hamilton dispute dragged through major part of the winter season. Altogether, 7,000 workers were idled.

One highlight:

A bitter disagreement within the 19-member Hamilton Building Trades Council over the fight between Local 18, United Brotherhood of Carpenters & Joiners, with the contractors.

The contractors offered carpenters a 30c hour increase which would have brought rate to $2.80 hour. A conciliation board majority report recommended such an increase.

Carpenters wanted 50c hr. originally, then later reduced demand to 30c plus 10c for pension fund.

Four other unions had previously accepted the 30c hour offer of contractors.

These were: bricklayers, cement masons, plumbers and operating engineers.

The labor council split into two camps over the dispute.

A faction, opposed to the carpenters' stand, favored crossing picket lines. Another sector was firm in support of the strikers.

Although members of several trades crossed carpenter picket lines at first, construction firms finally closed down all projects.

It marked the first time, possibly in last 50 years, that some building trade unionists failed to observe picket lines of a fellow union.

Here's the way wages have been moving in construction field, as measured by DBS:

- Weekly earnings on average for construction generally rose about 5.5% in the year to October, 1959. They averaged $77.58 in that month.
- **Average weekly earnings** in the building and general engineering group climbed 4.3% in same period to $83.62.
- **In road building class,** weekly wage average rose 7% from $61.98 to $66.22.

Average work weeks have remained fairly stable in the 41 to 42-hour range.

These averages of weekly earnings show a rise of around 83% since 1950 for construction generally.

The general construction average of $77.58 compares with $71.64 for all manufacturing.

Average for building and engineering industry of $83.62 compares with $86.13 for mining, $78.78 in durable goods manufacturing.

On the legislative front, interest centres in Ontario where last year a select committee of the legislature brought in its report recommending changes in labor relations law.

The government plans to adopt some of the suggestions perhaps to restrict some of the traditional rights of picketing.

It could have an important bearing on construction labor.

Spokesmen for management in the field have been pressing for various changes in labor codes, including the federal law.

Canadian Construction Association has argued for these amendments to federal legislation:

- **Clarification of legality of picketing** and strikes in their several forms.
- **Prohibition of closed shop.**
- **Civil status for unions** to make them legal entities.
- **Less interference, in jurisdictional disputes** from U. S. union sources.

One province, British Columbia, already has made unions legal entities under its labor relations legislation and has restricted some forms of picketing and boycotts.

Cement Faces Stiff Battle As Supplies Outrun Demand

No longer is there any complacency in the cement industry.

With Canadian supply exceeding demand, stiff battles are shaping up in most markets. New bulk storage and distribution plants are making some areas more accessible. New plants have become factors and another round of multi-million-dollar growth is contemplated.

Production in 1959 was about the same as 1958's 6.3 million tons.

Outlook for 1960: little change.

Total installed capacity in Canada now is close to 48 million bbl.—a bbl. is 350 lb. —against indicated consumption of 36 million bbl.

In recent months:

- **Miron & Freres Ltee.,** a big Montreal-based concrete products and construction firm, completed a new cement plant, rumored to have cost somewhat less than $30 million.
- **Inland Cement Co.** announced a 1.5 million bbl. expansion of its facilities at Edmonton and Regina.

Capacity estimates of the new Miron plant range from two million to four million bbl. If its capacity is the higher figure, it is half the size of **Canada Cement Co.'s** Montreal East plant, the largest in Canada.

Company, which has been a big customer of Canada Cement's, uses about one million bbl. annually. Presumably the rest of its capacity will be available for general marketing in the Montreal area.

Inland Cement, a subsidiary of **Sogemines Ltd.,** the Canadian arm of a Belgian industrial investment group, is adding another million bbl. of annual capacity to its two million bbl. Edmonton plant, brought into operation in 1956.

It is adding another 500,000 bbl. to its one million bbl. Regina plant, acquired from **Saskatchewan Cement Corp.** in 1957. By mid-1960 company's capacity will be 4.5 million bbl.

Meanwhile **British Portland Cement Co.,** London, Eng., is reported planning a $15 million plant near Cobourg, Ont., and Sogemines Ltd. is said to have long-range plans for a $15 million installation on the South Shore of the St. Lawrence river, opposite Montreal, where it has extensive property holdings.

Cement plants are expensive with total capital costs amounting to around $10 per bbl. of capacity. Machinery is large and heavy and manufacture involves an exacting process covering 80 separate operations.

Plants should be located close to raw material sources. There must be ample supply of heating fuel as 2,800 deg. F. is required in the kilns.

Because cement is a high-weight, low - cost product which cannot be shipped economically over long distances, there is a tendency to decentralize production.

Plants in Canada now number 19 and of these eight are operated by Canada Cement, including new facilities at Havelock, N.B., Fort Whyte, Man., Edmonton, Alta., and Woodstock, Ont. The giant of the Canadian industry with annual capacity of 24 million bbls., Canada Cement also has 10 distributing plants.

Most cement is consumed by the construction industry so that any further upswing in construction will result in more demand for cement and alleviate present oversupply.

Big gains are expected in the concrete products industry, especially in use of prestressed concrete, precast concrete and soil cement.

- **In prestressed concrete strengths** of concrete and steel under tension are combined to permit fabrication of concrete members to cover longer spans and bear greater loads than conventional reinforced concrete.
- **Precast concrete,** originally limited to masonry and pipe, has been adapted to many other construction forms.
- **Soil cement, a compacted mixture of soil,** Portland cement and water, finds applications in canal and reservoir linings and the base layers of heavy roads.

About 20 manufacturers produce structural precast and prestressed concrete.

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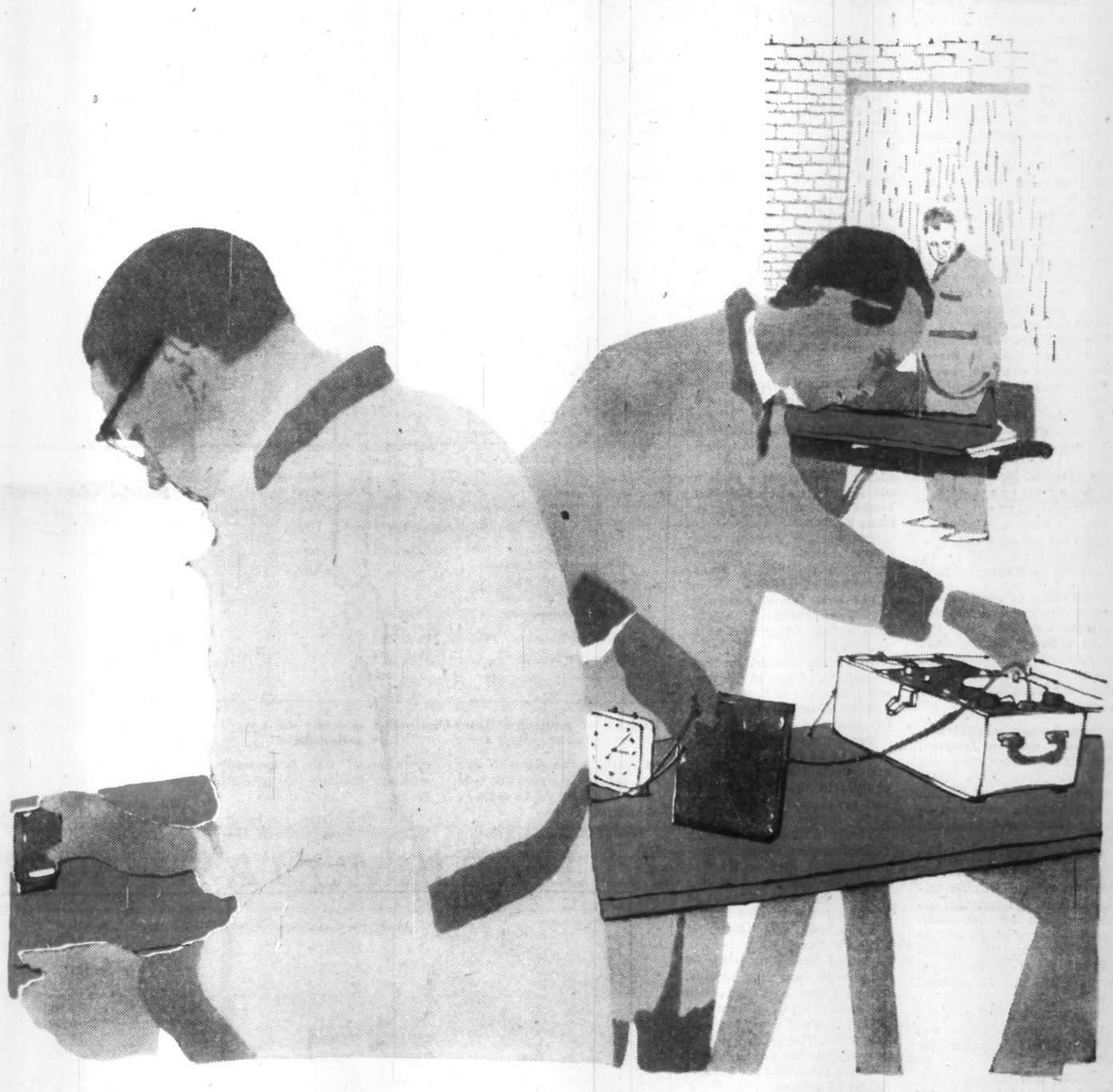

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PLACING REINFORCING steel for the concrete roof slab of the Toronto Transit Commission subway.

Subway

Extension Cuts Time

Most Torontonians haven't really noticed that work started last November on the first phase of the $200 million Bloor - Danforth - University subway in Metro Toronto.

There's been no disturbance to business. There have been no major traffic diversions to remind citizens that one of Canada's most important public works projects is in full swing.

Tunneling work has started; more than 200 piles have been placed for cut-and-cover construction; and a 170-ft. test section of the subway has been completed.

The joint Metro-TTC subway is being built in three stages spread over 10 years.

When completed, it will be 10 mi. long, have 25 stations and carry around 345,000 passengers a day in an estimated 280 subway cars.

It will reduce the present schedule time on Bloor St. cars, Keele St. to Woodbine, from 49 min., to 23 min.

About 1.5 mi. will be tunnel and 0.5 mi. open cut. The remaining 8 mi. will be in an underground concrete box.

● **First stage of construction** will be the 2-mi. University line which extends from the Union subway station, west on Front St., and north on University to Bloor St. Time taken for construction: 3½ years.

● **Second stage, scheduled to get under way in January, 1963,** is on Bloor St., and Danforth Ave., from University to Greenwood Station and it includes construction of the Greenwood Yard and shop.

Greenwood Yard is included in the second stage because Davisville Yard will be unable to provide temporary accommodation for the additional 100 cars which will be in service after the completion of the section from Avenue Rd. to Greenwood Ave.

This property will cover an area of over 38 acres and will provide storage space for 328 cars.

Complete modern maintenance facilities for the cars of the Yonge subway as well as those of the new Bloor-Danforth-University subway will be installed.

● **Third stage will extend** the line westerly on Bloor St. to Keele St., and easterly on Danforth Ave., from Greenwood to Woodbine. Work on this final step should start in January, 1967, and be completed in 1969.

Assembling of the land for the 10-mi. route is one of the major jobs of the project and is expected to take four years to complete.

Preliminary estimates of the right-of-way cost have been set at $15 million for the 850 properties affected. Metropolitan Toronto is purchasing the right-of-way and will retain ownership.

Of the 850 properties to be expropriated, about 680, or 80%, are residential.

The two - mile University line is divided into three construction sections and work has started on two of them. Bids have been called on the remaining section from Union Station to Osgoode Station, at Queen St.

Thus far, construction and material contracts totaling just under $20 million have been awarded. These include:

● 22,000 tons of cast iron tunnel liners from **Canada Iron Foundries Ltd.**, $3,867,-972.

● Supply and installation of tunnel shields by **Canada Iron Foundries**, $1,162,808.

● Construction of the one-mile tunnel section from Osgoode to Museum stations by **Robert McAlpine Ltd.**, $7,-659,561.

● Construction of the cut-and-cover section from the north end of Queen's Park to Huron St. by **McNamara-Raymond Ltd.**, $6,874,107.

● Construction of a special 170-ft. section to test a subway construction method used extensively in Milan, Italy, **Icanda Ltd.**, $183,000.

About 1½ mi. of the 10-mi. subway will be tunneled; 1 mi. on the University section and a short section between Yonge and Sherbourne on Bloor St.

Construction by the tunneling method was decided for these sections to avoid disruption of traffic.

The first tunnel contracts went to Robert McAlpine Ltd., a firm which has built tunnels in the U. K.

Work has started on two tunnel shafts, one at University just north of Edward St., and the other at Queen's Park Crescent and College.

Excavation has reached a depth of 54 ft. at the southerly shaft. Compressed air equipment has been installed and excavation is continuing under air pressure.

The twin tunnels will be 16 ft. in diameter, except at stations where they will be 24 ft. At the south end of this section, they will be about 30 ft. below the surface at the south end and 15 ft. at Queen's Park.

Actual tunneling will be done with tunneling shields. These are equipped with hydraulic jacks that move the shield forward along the tunnel route. The earth is forced through the back of the shield in thick slabs that are cut and taken to surface.

As the shield is pressed forward, heavy cast iron tunnel liners are inserted behind it. These form the outside wall of the tunnel.

The hydraulic tunneling shields will be in operation by April.

The second major construction contract covers the north end of the University line from the Queen's Park Crescent to Huron St.

McNamara-Raymond Ltd., were the successful bidders for the job.

This section will be built by the standard cut-and-cover method used on the Yonge St. subway, with one important exception.

To reduce noise, conventional pile driving has been eliminated and a pre-boring method is being used.

Holes are bored and the steel piles are placed in the holes and secured by a foundation of concrete.

So far, more than 200 piles have been installed in this manner.

The TTC is pleased with the favorable results of the pre-bore method on this section, including the virtual elimination of the noise usually associated with pile driving, and will consider it for the south end of the University line.

Other progress on the McNamara-Raymond section to date includes the underpinning of several buildings adjacent to the right-of-way and temporary relocation of the 48th Highlanders Memorial.

One of the most interesting construction phases of the subway, is the 170-ft. test section which has been completed using a variation of cut - and - cover construction which eliminates the need for temporary piles, decking and forms for the subway walls.

TTC representatives saw the Icos system, as it is called, being used in Milan, Italy.

Impressed with what they saw in Milan, the TTC went ahead with a test section just north of Bloor St. west of Avenue Rd., to enable them to fully assess the feasibility and economics of this type of subway construction in Canada.

The contract was awarded on a cost-plus basis to Icanda Ltd., at an estimated $183,-000. The test job is finished and a report is being prepared for study by the commission.

If the report is favorable, the new method will be considered for use on the Bloor-Danforth section of the work.

With the Icos system, the outside wall of the subway is built by digging a deep trench with a special excavating machine.

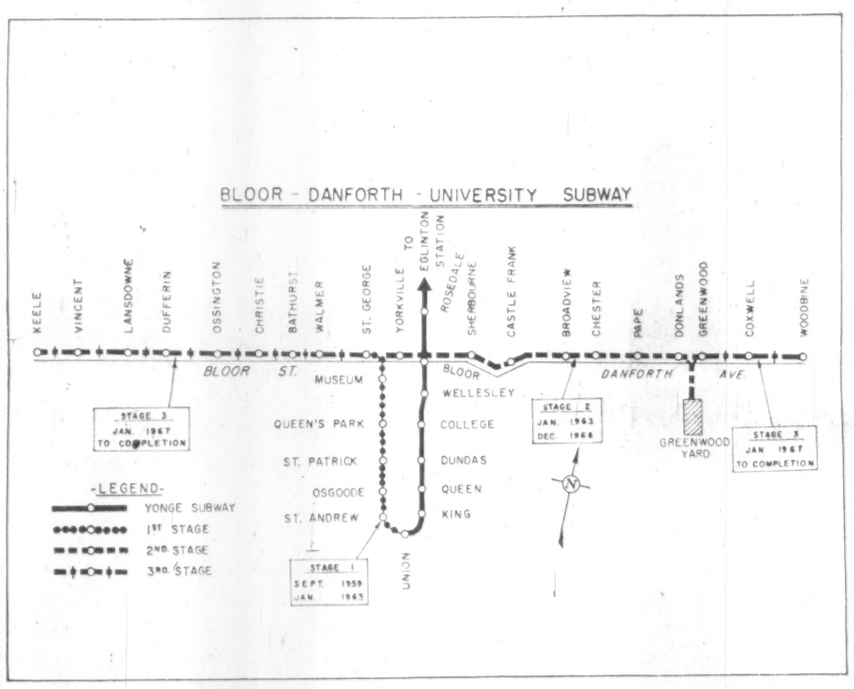
During the excavating operation the trench is filled with a solution of bentonite, an inert clay. This solution supports the walls of trench without forms.

Reinforcing steel is then placed into the trench and the concrete is poured through a long spout to the bottom of the trench. As the concrete fills the trench it displaces the bentonite solution.

When both walls are finished the space between them is excavated to the level of the subway roof and the concrete roof slab is poured without the use of special forms.

In the next step, the earth is mined from between the walls and below the roof down to floor level.

The concrete floor is then poured and the structure is complete.



ROUTE of projected Bloor-Danforth-University subway, Toronto, showing construction schedule.

Otter Rapids Project

Halfway between Cochrane and Moosonee on the Abitibi River, **Ontario Hydro** is building a $39 million power plant at Otter Rapids.

As one of the largest hydro-electric plants to be built in Northern Ontario during the last 10 years, the project will have a work force of 650 during the peak of construction this summer.

The problems associated with the construction of the powerhouse and dam are one thing.

The problems of accommodating construction men and their families in the middle of nowhere are another.

A miniature city with basic water, sewer, electrical and garbage services for a population of 1,000 must be built before a yard of concrete can be poured in the dam.

Unlike problems associated with the powerhouse, which can be settled within the engineering department, the construction of a miniature city in the wilderness raises difficulties involving many organizations outside Ontario Hydro.

Perhaps the first of these is the Department of Lands and Forests.

SPILLWAY SLUICES at the site of Ontario Hydro's new Otter Rapids plant. Deck slabs on the top were precast and then placed in position.

The engineers who plan these communities must apply to the department for a licence to occupy the land.

Through the district forester, the department enforces certain standards of fire protection when the camp site is being cleared of trees and the brush burned.

As soon as the area has been cleared of trees and the snow has melted, men and equipment are rushed in.

During this period, men sleep, eat and wash in tents while water and sewer lines are being buried in the ground.

Dormitory and cafeteria construction is given priority.

As each is completed, accommodation can be provided for more men to speed work on other dormitories and facilities.

Single employees live in dormitories housing 44 men each. At Otter Rapids nine such dormitories have been constructed.

In addition, dormitories have been provided for foremen, cook staff and clerical workers.

The design of the dormitories has improved over the years and the present arrangement of two men to a room provides a considerable measure of privacy. Over 400 men are fed daily in the large cafeteria.

Some families live on the project in their own trailers or houses in neat lines along streets hacked out of the dense bush.

Each lot is serviced with water, sewer and electricity.

Some have picket fences to confine toddlers.

Flower and vegetable gardens are found in this community, as in most others.

The beginning of September was the target date for completion of the school and those homes in which children of school age will live.

At Otter Rapids, a four-room school has been constructed and half of the 200 children at the colony are pupils.

Recreation in isolated areas is a necessity.

Hydro has provided a recreation building for the use of all employees and their families.

The building contains a commissary, bowling alleys, billiard tables and a theatre.

In addition to two movies a week, the theatre is used for badminton, dances, cub pack meetings and by visiting clergymen of at least three different denominations.

Although many employees have their own trailer, very few have automobiles.

There are no roads linking this hydro development with provincial highways.

For this reason, Hydro built a grocery store to supply the 150 families in the colony.

The Post Office leases office space in a small building, shared also by a branch of the **Bank of Montreal.**

A short railroad siding adjacent to the fuel oil depot ensures adequate supplies of heating fuel oil — an absolute necessity at Otter Rapids where temperatures often drop to —30 deg. F.

The short spur siding for tank cars is only a small portion of the one mile of sidings which have been installed by the **Ontario Northland Railway.**

Shortly after Hydro completed negotiations, the ONR increased its service to the site, installed a station and a station agent, and revised its time tables to include Otter Rapids as a regular stop.

Good drinking water became a problem as the size of the colony increased.

A filtration plant complete with sand and carbon filters was installed and chlorine is added as the water is pumped from the filters to an elevated water tank.

Although the community of Otter Rapids may be compared favorably in many ways with other Ontario centres, its permanence is in sharp contrast to most.

Otter Rapids lives in the present. The future holds only the promise of extinction as each day brings the powerhouse nearer completion.

When plans for the development were announced in 1958, three generating units with a total capacity of 131,-000 kw were definitely scheduled.

Installation of a fourth unit was recently authorized and provision is being made in the station's design for the addition of four more.

The eight units together would produce 360,000 kw — making the station the largest hydro-electric development in Northern Ontario.

Otter Rapids is scheduled to produce initial power in 1961.

When the job is completed the plant will be operated by remote control.

Then the site will be wilderness once again.

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B-3008

Building Toronto's new subway:

DUMP TRUCKS WILL MOVE 2 MILLION CUBIC YARDS OF EARTH

With Parliament Buildings as a background, dump trucks form an endless line in the excavation of Toronto's newest subway. The clay and rubble removed from this giant project could build a wall three feet high and three thick stretching 1136 miles from Toronto to St. John's, Newfoundland.

Loading at the hopper on University Ave., one of the many Ford-built dump trucks used on the subway hauls another heavy load of wet clay. It calls for heavy duty trucks and heavy duty power to stay on the job. Ford of Canada has a complete line of dump trucks for heavy duty service.

A dump truck has to be built big for the job. A yard of heavy clay tips the scales at one and a half tons. This Ford of Canada truck has been on the job for five years and it's still going strong. This takes "truck-tough" parts all the way through for economical performance.

That's more than 400,000 dump-truck loads of earth, clay and rubble. Most of it will be carried by Ford-built trucks.

Carving out a new subway in the midst of a bustling big city is a tricky, difficult, time-consuming job. It requires the services of many highly-skilled dump-truck operators—both excavating contractors and independent owners. One thing they both need to make their job far easier and more profitable, is a truck that can "take it".

Jolts, shocks and knocks

Jolts, shocks and knocks are a built-in hazard of the dump truck business, on the Toronto subway job or *any* job. Ford of Canada has a complete line of dump trucks designed to take punishment . . . built to give Canadian dump operators economical performance on the toughest truck jobs.

Truckers working on the subway will buck stop-go city traffic and axle-deep mud. This kind of hauling needs a "truck-tough" engine. Engine for engine, Ford of Canada's eight big truck V-8's are designed to outpull, outperform and outlast any competing power plant. Displacements range from 292 cubic inches to 534 cubic inches, making it easy for truckers to match the engine to the job. And with big fleet operators logging 150,000 to 200,000 miles without major overhaul, dump operators can be sure of eliminating costly down-time due to "little engines that couldn't".

The long versatile line

In 1960, truckers can choose from the biggest selection of power train options in Ford of Canada's history. Example: In the 33,000-lb. GVW 950 series, there are six transmissions to choose from and six rugged front and rear axles. This kind of versatility insures that every truck user, whether he wants a stylish Sedan Delivery, a 21,000-lb. GVW combination dump or a 75,000-lb. GCW tractor-trailer rig, can get a truck that's right for the job.

Saving *your* money is a tradition at Ford of Canada. Because of high-volume production, Ford of Canada is able to market the highest quality units at costs that help keep treasurers and owners smiling. Some of the savviest truck engineers in North America are Ford people. They are constantly searching for, and finding, new ways to make Ford of Canada trucks better, more efficient "tools". To the Canadian trucker this means *better* performance, *lower* operating costs, *more* money earned!

Marshmallows or steel beams?

You can be sure there's a Ford of Canada truck for your job, whether you're delivering marshmallows or jockeying steel beams. The dump truck guide below is one example of what a wide range of Ford of Canada trucks and options is available. There are comparable choices in every field of trucking. Ford of Canada offers pickups, panel deliveries, parcel deliveries, dump trucks, farm trucks, tandem axle trucks, tilt cabs, *every conceivable type of truck.*

If you're helping build Toronto's new subway, if you're in the truck business, or if you use a truck in your business, your Ford of Canada truck dealer wants to see you. He wants to prove to you that the wide selection of Ford of Canada trucks and options can save you money . . . and money saved means higher profits!

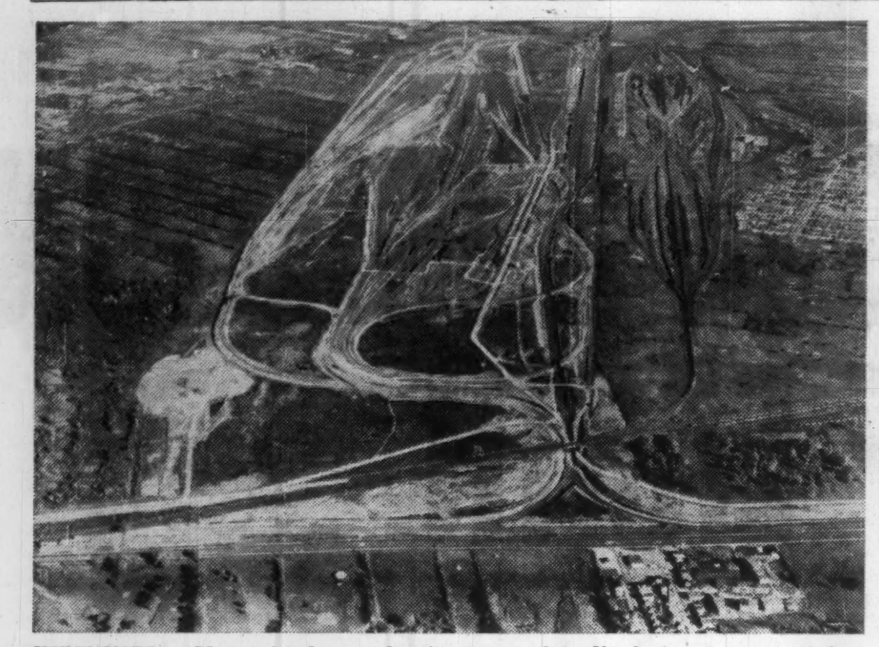
FORD OF CANADA DEALERS OFFER A COMPLETE LINE OF DUMP TRUCKS

MODELS	DUMP BODIES AVAILABLE (CAP. CU. YARDS)	ENGINE	GROSS H.P.	AXLE CAPACITY (LBS.) STANDARD	AXLE CAPACITY (LBS.) OPTIONAL	MAXIMUM GVW (LBS.)
F-M-600	3—5	292 V-8 292 HD V-8	172 180	F 4,700 R 15,000	6,000 16,000	21,000
F-M-700	4—6	292 V-8 292 HD V-8	172 180	F 6,000 R 15,000	7,000 16,000 18,500	25,000
F-M-750	4—6	302 V-8	194	F 6,000 R 16,000	7,000 18,500	25,000
F-M-800	5—7	332 V-8	205	F 7,000 R 18,500	9,000 11,000 22,000	27,000
F-M-850	5—7	401 SD V-8 (4V)	220	F 7,000 R 18,500	9,000 11,000 22,000	27,000
T-700	6—8	292 HD V-8 302 V-8	180 194	F 6,000 R 22,000	7,000 28,000	33,000
T-750	7—9	332 V-8	205	F 7,000 R 28,000	9,000 —	37,000
T-800	10—12	332 V-8	205	F 9,000 R 34,000	11,000 15,000	45,000

MODELS	DUMP BODIES AVAILABLE (CAP. CU. YARDS)	ENGINE	GROSS H.P.	AXLE CAPACITY (LBS.) STANDARD	AXLE CAPACITY (LBS.) OPTIONAL	MAXIMUM GVW (LBS.)
T-850	10—12	401 SD V-8 (4V) 477 SD V-8 (4V) 534 SD V-8 (4V)	220 257 270	F 9,000 R 34,000	11,000 15,000 28,000	45,000
F-M-850	16—18	401 SD V-8 (4V)	220	F 7,000 R 18,500	9,000 11,000 22,000	50,000*
F-M-950	18—20	401 SD V-8 (4V) 477 SD V-8 (4V)	220 257	F 7,000 R 22,000	9,000 11,000 23,000	55,000*
F-M-1000	18—25	477 SD V-8 (4V)	257	F 9,000 R 23,000	11,000 15,000 —	65,000*
T-850	20—25	401 SD V-8 (4V) 477 SD V-8 (4V) 534 SD V-8 (4V)	220 257 270	F 9,000 R 34,000	11,000 15,000 28,000	70,000*
T-950	25—27	401 SD V-8 (4V) 477 SD V-8 (4V) 534 SD V-8 (4V)	220 257 270	F 9,000 F 38,000	11,000 15,000 —	75,000* *GCW

FORD MOTOR COMPANY OF CANADA, LIMITED

MERCURY TRUCKS • FORD TRUCKS



HUMP YARD at Montreal is largest classification yard in North America, one of four which CNR will have in operation by 1962.

Railways Big Spenders In Building Business

Canada's two major railways are heavy-spending customers for the construction industry.

Across the country they are constantly improving their facilities. Many new rail lines have been built in post-war years.

Six major projects will be completed during 1960 by **Canadian National Railways.**

Originally scheduled for completion in 1961, the Montreal Hump Yard, the largest yard of its type in North America, will be in operation this fall.

Capable of classifying 7,000 freight cars a day with standing capacity for 10,000 cars, the electronically controlled hump yard is being constructed at a cost of $28.5 million. This year's expenditure is estimated at $8.8 million.

At Moncton, a similar yard designed to handle 3,500 cars a day with standing room for more than 4,200 cars will also be operating this fall. Approximately $6.2 million will be spent to complete the $15 million yard.

Two other hump yards are progressing rapidly.

At Winnipeg, where work started a little more than a year ago on the Symington Yard, grading and drainage is well under way, and track work has begun.

Covering an area of 628 acres, the $24 million yard will have the facilities to classify 7,000 cars a day with standing capacity for more than 6,900 cars.

This year's expenditure will be $9 million and the scheduled date for completion is 1962.

In Toronto, plans are virtually complete for the construction of an automatic classification yard to relieve the growing congestion of railway facilities in that area.

An estimated $8.4 million will be spent this year for land purchase and other preliminaries.

The yard will be able to classify 7,000 cars a day and will cover an area of 13½ sq. mi.

Other yard improvements scheduled for this year are alterations and additions at Corner Brook, Nfld., and improvements and alterations at St. John's, Nfld.

Since World War II, CNR has added more miles of new railway than any other railroad on the continent.

The last link of the 294-mi. branch line into the rich mining area of northern Quebec from Beattyville to Chibougamau and St. Felicien, was officially opened to traffic last October.

In 1957, the first 161 mi. had been completed.

Costing $40.8 million, almost $500,000 will be spent on the line this year.

Another major branch line will be completed in 1960, in Manitoba.

Running 52 mi. between Optic Lake and Chisel Lake to serve the **Hudson Bay Mining & Smelting Co.**, it is expected to be operating in June.

Of a total cost of $10.2 million more than 20% will be spent this year to complete the line.

Three spur lines will be worked on:

A 6.7-mi. $1.9 million spur to serve Deas Island, Vancouver.

Spurs to serve **Hogarth Mines** and **Caland Ore Company,** both at Atikokan, Ont.

With the coming of the Seaway, CNR has had to erect an alternate route around the St. Lambert locks to provide an uninterrupted flow of rail and road traffic across Victoria Bridge.

The new highway approaches to the bridge and the two liftspans over the locks were completed in time for the opening of the Seaway in April.

As well, the rail diversion being constructed around the St. Lambert lock was extended to the point of intersection with the existing bridge.

The project, estimated at $15 million, will be completed this year.

To facilitate access to the Montreal Hump Yard, the railway is relocating its main line west of Montreal which will eliminate a number of level crossings through Lachine.

Part of the old line is being removed and the balance will revert to a switching spur.

A new line runs parallel to and north of the Metropolitan Boulevard. A $4.9 million project, CNR will spend $2.5 million this year to complete the relocation.

Improvements were made this past year on three of CNR's hotels — Fort Garry, Macdonald and **Jasper Park Lodge.**

This spring, the opening of an 11-story extension to the **Nova Scotian Hotel** in Halifax, and the remodelling of the existing building will more than double the hotel's capacity to 327 rooms. The extension has been estimated at $4.5 million.

Progress has been made in the Montreal downtown development.

In May, 1961, a 17-story modern headquarters office and garage building will be open to house CNR employees now scattered in more than 20 locations in Montreal.

Steel began rising in September and this year the corner-stone will be laid.

Of a total expenditure of $17.5 million, this year's outlay will be $10.9 million.

Co-incident with CNR's long-range terminal development (of which the new headquarters building is a part) the south entrance to the three-mile Mount Royal tunnel is undergoing extensive alterations.

A small expenditure will complete the alterations this year and allow overhead construction of Place Ville Marie.

Station facilities under Montreal's **Queen Elizabeth Hotel** and a ventilation system of the track level area at Central Station will also be built this year.

To bring about further improvements in the speed and safety of train operations, Centralized Traffic Control, a signalling system, is being carried out in a long-range program which will give automatic traffic control on 40 subdivisions by 1966.

The program will cover some 4,400 mi. of mainline track at a cost of $40 million.

In 1959, CTC was installed on five subdivisions and this year it is anticipated six others will be completed. In all, work will proceed on 14 subdivisions this year at an estimated cost of $5 million.

Across the system, other mainline improvements will be carried out.

A program for rail replacement including new fastenings will cost $39.2 million this year; tie replacement $8.6 million; installation of ballast $5.6 million and widening cuts and fills $8.6 million.

Last year **Canadian Pacific Railway** began construction of a new yard at Lancaster, N.B., to relieve congestion during the winter port season and to provide longer tracks for diesel-operated trains. These largely carry freight from ships which call at Saint John between the close of navigation in the St. Lawrence and its reopening.

During 1959 construction was also started on piggyback facilities at Grovehill in the Montreal area, to accommodate the handling of truck trailers and flatcars.

The 1959 work on this operation mostly covered loading ramps and trackage.

Construction was begun last Fall on a 300-ft. x 42-ft. shop at Glen Yards to expedite servicing of rail diesel car units. Its foundation was completed by the end of 1959.

In 1959, the first year of a two-year program was started to install Centralized Traffic Control on the Oshawa subdivision from Trenton to Agincourt.

The 1959 work included the stretch from the west end of the Trenton yard to the west end of the Port Hope siding. This system, when completed at the end of 1960, will improve train performance and provide better utilization of both cars and motive power.

Construction of an automatic gravity switching yard at Agincourt was started last year. This yard, when completed, will replace or augment Lambton, West Toronto, Leaside, and other marshalling yards in the Toronto area.

It will expedite traffic from, to and through Toronto, and generally provide improved facilities for handling traffic.

Work was carried out in 1959 at Weston, Ont., to provide for piggyback facilities involving trackage rearrangement, construction of a terminal office building, and yard floodlighting.

In 1959, CPR started on the first year of a two-year project to install centralized traffic control on its Swift Current subdivision between Moose Jaw and Swift Current, Sask. This program will permit the conversion from double to single track operation on this subdivision, providing a considerable maintenance cost saving.

A two-year program was also started during 1959 for replacement of absolute permissive block signals with centralized traffic control in B. C. between Revelstoke and Taft. This work will also permit single-track operation in the area.

Office buildings and other related facilities were constructed at Vancouver, Victoria and Nanaimo to provide for merchandise services, a new department permitting integration of various merchandise handling services.

Perini Builds Concentrator Near Cartier

Despite extended sub-zero temperatures and occasional driving blizzards, workmen of the **Perini Quebec Inc.** sponsored joint venture of **Perini-Morrison-Knudsen** are pushing forward on schedule one of northern Quebec's largest, toughest and most significant development projects — construction of a $15 million iron ore concentrator and surface buildings for the **Quebec Cartier Mining Co.,** at Lac Jeannine, Que.

Lac Jeannine is 200 mi. north of Port Cartier and the booming Sept-Iles area, near 500 million tons of high grade iron ore reserves.

The concentrator will be the heart of a $200 million enterprise involving construction of a new harbor at Port Cartier, a 193 mi. long railroad, a townsite for 6,000 people and a 60,000 hp hydro-electric station.

It will have a capacity of 8 million tons of processed ore a year and will be completed by March 15, 1961, four months after production of the first ore from strip mines in the area.

Rugged terrain, the severe climate and logistical problems stemming from the remoteness of the site are some of the challenges facing Perini-Morrison-Knudsen at Lac Jeannine.

The construction project calls for a gross contract transfer volume of 25,000 tons of supplies and materials.

Most of it will be hauled by truck convoys and tractor trains over a wilderness road whose rugged monotony is broken only by construction camps for the advancing railroad.

The remainder — emergency loads of food, bedding, dynamite and other sundries — will be flown to the job site where 1,500 workmen are now living in camps.

Truck convoys take from eight to 10 hours to negotiate the 200-mi. road which was built by Perini Quebec Inc., sponsored joint venture of **Perini-O'Connell-Quemont** in 1957.

Quebec Cartier will process wet ore at Lac Jeannine by mechanical methods using centrifugal force and massive machinery to increase the iron ore content by 50%.

The Perini-Morrison-Knudsen contract will involve the installation of 7,600 tons of owner-furnished equipment including crusher jaws weighing 465,000 lb.

One unit for this crusher—the largest single piece to be carried over the 200-mi. highway — will weigh 75,600 lb.

To pave the way for construction of the concentrator and surface buildings at Lac Jeannine, Quebec Cartier Mining Co. built construction camps and roads, blasted 50,000 cu. yd. of rock from the site and built a four-mile long, 24-in pipeline to bring water from Lac Barbell, location of the future town of Gagnonville.

Surface facilities under construction include a crusher building, ore conveyors and ore storage buildings, a boiler house, maintenance shop and warehouse.

CONTROL MOVEMENT FROM ONE CENTRE

Remote control of industrial processes is readily obtained with Dupar Control Panels. These grouped motor controls are indispensable where there are closely interlocking production sequences and where large scale material handling is on a continuous basis.

Frequently needed in remote controlled complex operations is proof of movement. Dupar Control Panels give this proof visually or audibly as required.

Production of materials for the construction industry often require the use of control panels such as this one, specially designed by DUPAR for controlling movement and mixing of materials.

DUPAR CANADA LIMITED
KITCHENER, ONTARIO
(ASSOCIATED WITH DOMINION ELECTROHOME INDUSTRIES LIMITED)

Engineered Control Systems • Process Control • Electromagnetic Brakes • Limit Switches and Auxiliaries • Elevator Controls

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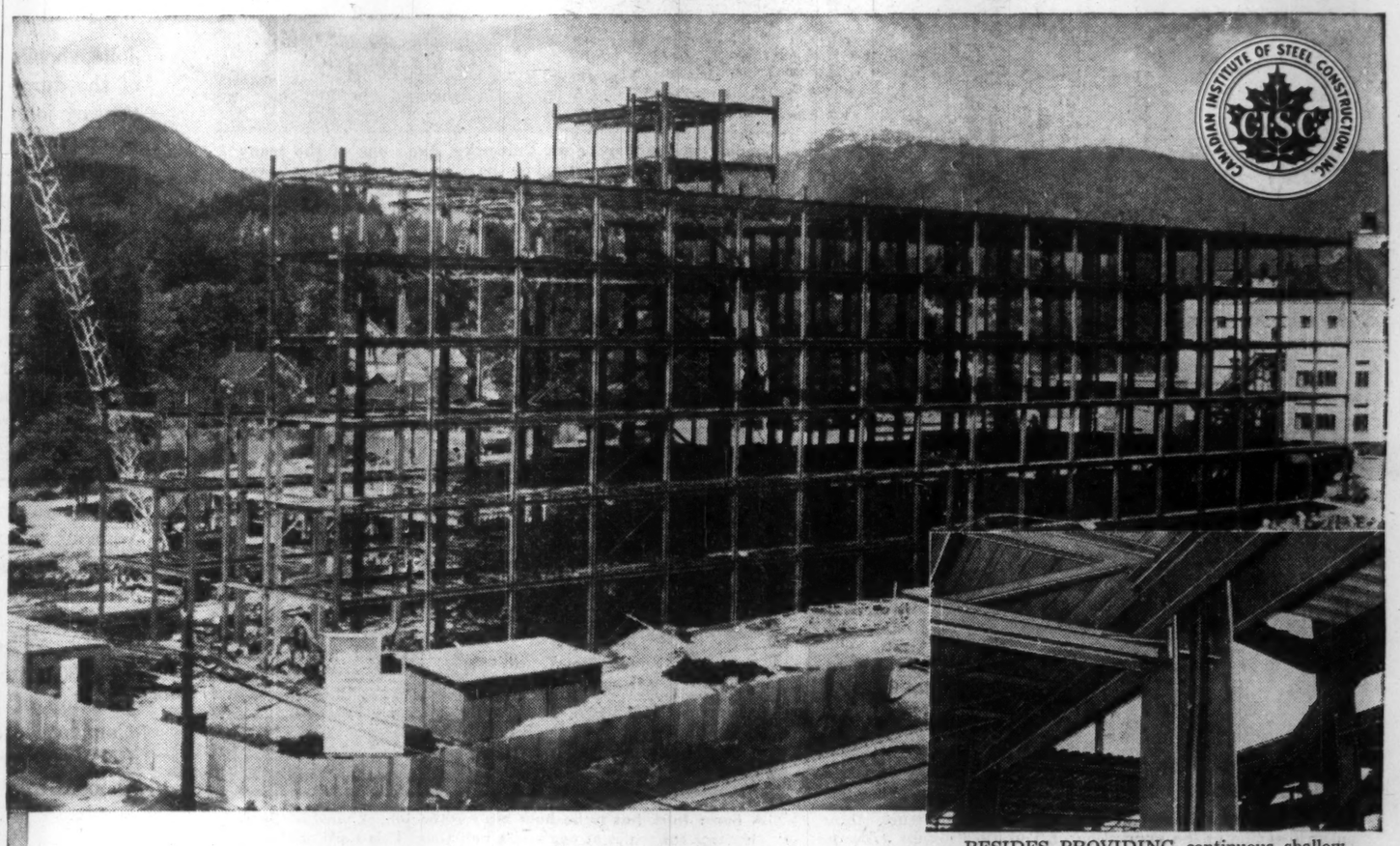


BESIDES PROVIDING continuous shallow depth floor girders, twin channels placed on opposite flanges of the columns allow more efficient positioning of vertical pipe runs.

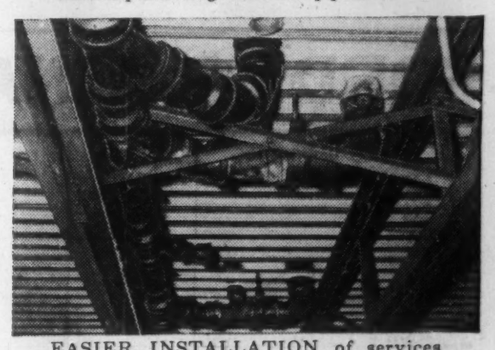
These pictures show
HOW TO SAVE A MILLION

Savings of nearly one million dollars have been effected in construction at the new Lions' Gate Hospital in North Vancouver.

This was due largely to the flexibility of steelwork design which allowed a more economical installation of mechanical and electrical services and a reduction of nearly forty percent in total dead weight.

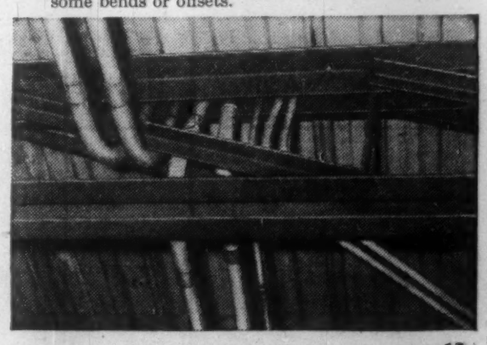
Three of many striking examples of the adaptability of steel construction are shown on this page. Dominion Bridge, Vancouver, fabricated and erected the structural steel frame.

Plans for the hospital were prepared by the Vancouver architectural firm of Underwood, McKinley and Cameron. Structural consultants were F. Wavell Urry and R. C. Clough Engineering Ltd., also of Vancouver.



EASIER INSTALLATION of services through the use of open web steel joist system, shown above, was one of important reasons for the substantial savings realized in the construction of the hospital.

SMALL PIPES FOR OXYGEN, vacuum and electrical services are easily passed through the spaced double angle top chords of the joists directly into partitions without troublesome bends or offsets.



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structural steel by
DOMINION BRIDGE
FOURTEEN PLANTS—COAST-TO-COAST

Forest Products

Huge Expansion in 10 Years

Canada's vast forest products industry looks forward with confidence to the new decade.

That is as it should be, because almost no other segment of Canada's economy plays such a vital role in assuring national growth and well-being.

There has been a tremendous expansion in the last 10 yr.

- **Production totals** showed annual increases.
- **There has been a notable increase in sales.**

Forest products continue as the dominant factor in export trade and account for approximately a third of all our exports.

The industry provides employment for one out of every eight Canadian wage earners.

From the Atlantic to the Pacific, and from our southern border northward to the limits of habitation, there is not a city, town or hamlet which does not to some extent feel the need and the impact of wood.

Rising labor costs, higher freight rates, increased taxation, have compelled close surveillance of production costs so that lumber would reach the consumer at a price he was willing to pay.

In the home construction field particularly, lumber has had to meet massive competition from substitute materials.

Some ground has been lost in some areas, while gains have been recorded in other spheres.

Generally it can be said that lumber has met the test successfully and it continues its role of the dominant material in the home construction field.

There are many important indications that augur well for the lumber industry.

There is growing evidence of increased interest in the use of wood, not only in home construction, but in public, commercial and industrial buildings.

Progress has been recorded in modernization of equipment and the adoption of improved production techniques.

Lumber is being produced in forms and sizes more suitable to consumer requirements.

Quality control continues to spread through the industry in order to maintain the high reputation of lumber throughout its fields of use.

Other developments of importance provide encouragement for the future.

Chief among these is the announcement in the Throne Speech at the opening of Parliament that a federal department of forestry will be created.

This is welcome news to the lumber industry.

For many years representations have been made to the government to the effect that just recognition was not given to the needs of the lumber industry, and to the vital importance of the role played by lumber in so many areas of the national economy.

It is anticipated that with the grouping under one direction of all the work pertaining to forests and forest industries, and with necessary expansion of activities wherever needed, a more stable basis will be developed for the continued growth and expansion of all forest products industries.

This should, in turn, considerably improve their economic stability and enable them to make a yet higher contribution to the sound and ordered development of Canada.

The industry believes that the government is at last taking a step which has long been overdue.

Up to now only minimum help has come from the Federal authorities, and though the industry has always been appreciative of the work done and help given, it has long been apparent that a much greater effort was urgently needed.

The Canadian Lumbermen's Association believes that it has made substantial contribution towards bringing about the government's decision.

Briefs prepared and presented to the Northern Affairs and National Resources Minister Hamilton, in the summer of 1958, and to the House of Commons standing committee on mines, forests and waters, in the spring of 1959, contained, essentially, the requests for the actions recommended to parliament in the committee's report.

That there is recognized need for the new department of forestry is best emphasized by the following quotations from the parliamentary committee's report:

". . . insufficient recognition has been given to our present dependence on the forest industries.

"Their well-being and that of the nation must count on a re-awakening of government to the needs of the various phases of these industries.

"The potential in this field for healthy, continued growth provides a challenge to all levels of government.

"Market and investment problems, scientific and technical requirements, must all be met to sustain these industries and their balanced growth.

"In the past the forest industries have developed without calls on the federal government for assistance.

"Today there are international market and marketing problems which the industries cannot face alone.

"In contrast to mining and oil enterprises, these industries are harvesting a recurring crop which with care and good management does not deplete and can enlarge our natural resources."

The report further pointed out that, during 1958, total export value of our wood, wood products, and pulp and paper, was $1,414 million while the total value of all our exports for that same year totalled $4,830 million and then stated:

". . . The forests support industries which are first in the nation in terms of: employment, wages paid, freight loaded, new capital investment, and net value of the output product in dollars.

"As a factor in the gross national product, these industries represent twice the combined value of all metal mines in Canada.

"The woods produce both more dollar products and a higher export value than the nation's second largest export, wheat."

The committee, under the chairmanship of J. W. Murphy, received many briefs and heard many witnesses.

Throughout its report there is evidence that their examination of the record and the evidence was a thorough one and that their recommendations were based on careful consideration and assessment of all the economic and national factors involved.

In recommending the creation of a department of forestry, the committee had this to say:

"Your committee strongly recommends consideration of steps which would widen the scope of the forestry branch, increasing its status in such a way that a deputy minister would be in direct charge.

"The fact that such a status, comparable to that of a department, does not exist, reflects a lack of appreciation of the importance of the forest industries to Canada, in the past, now, and in the future.

"Other departments of government are considered essential to serve industries or aspects of our national economy which are of much lesser economic consequence."

The most outstanding development for the lumber industry during the year 1959 was the November announcement by the U. S. Federal Housing Administration, effective April 1, 1960, of mandatory grade marking of all board and framing lumber used in constructions carrying FHA insured mortgages.

Grade marking of lumber has been a subject of discussion for many years and the lumber industry generally, and good producers in particular, are favorable to grade marking, as perhaps the most important single means of ensuring consumer satisfaction and maintaining the enviable reputation of lumber.

The Canadian Lumbermen's Association has taken all necessary steps to introduce grade marking at all its member mills.

The grade marks to be used have been accepted by the FHA, and grading will follow FHA requirements.

Exports to the U. S. will thus be continued without interruption, and with the only change being the grade marking required for FHA lumber.

Housing is causing considerable concern to the lumber industry.

There are indications that housing starts during 1960 will be considerably lower than for 1959.

Since home construction is the principal home market for lumber, any substantial decrease in total units built would adversely affect the lumber market.

Increased interest rates, with the accompanying increase in monthly carrying charges, coupled with what appears to be a volume shortage in available mortgage funds, are the chief factors likely to bring about a downward trend in home construction.

It does appear that financial and government circles should join immediately in a close study of the over-all situation with a view to devising policies which would effectively meet present urgent needs for mortgage funds at interest rates which would not impose an unbearable load on home purchasers.

In the past decade, a large number of homes have been constructed throughout Canada. For the most part there has been ready sale for the homes offered.

However, the home owner market potential is still great.

Up to now, the price tag on homes has been such that only those with annual incomes substantially above the Canadian average have been able to purchase.

There is unquestionably an untouched market for housing, providing we can plan developments and housing where the total of land costs, servicing, and construction will be kept within over-all totals—both for original and monthly payments that can be met by large numbers of wage earners.

The lumber industry is doing its share in order to keep abreast of changing conditions.

Every effort is being made to improve production and to control cost so that lumber prices will prove economical to the home builder.

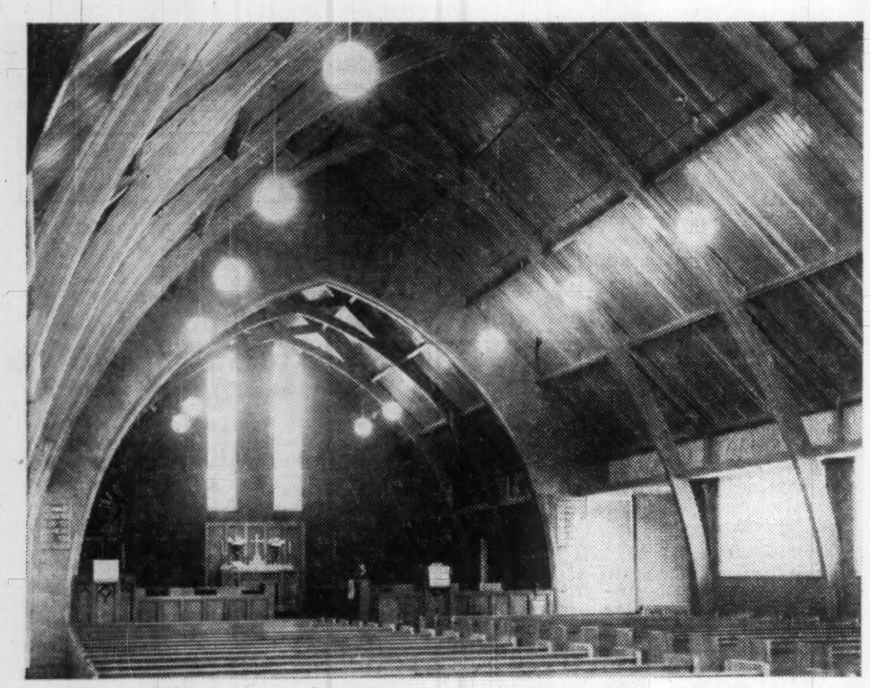
To do this mechanical equipment is being modernized and production helps are being installed.

More care is taken to control quality of production and to extract from the log as great a quantity of salable material as possible.

In addition, there have been considerable developments in the production of pulp chips from sawmill residues in the form of slabs and edgings.

This is a worth-while development which can contribute substantially in the reduction of over-all costs of lumber.

While progress in this direction has not been as rapid as would be desirable, it has been considerable and in Eastern Canada alone, during 1959, more than 300,000 tons of pulp chips have been produced from mill residues.



GLUED LAMINATED beams in the Church of the Redeemer, London, Ont., are architecturally beautiful, structurally strong, durable as wood itself.

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75 YEARS OF SERVICE TO THE CONSTRUCTION INDUSTRY

During these years, Osler, Hammond & Nanton has accumulated an impressive fund of information on the construction industry and an incisive understanding of their problems. With offices across the nation, OHN serves the construction industry with:

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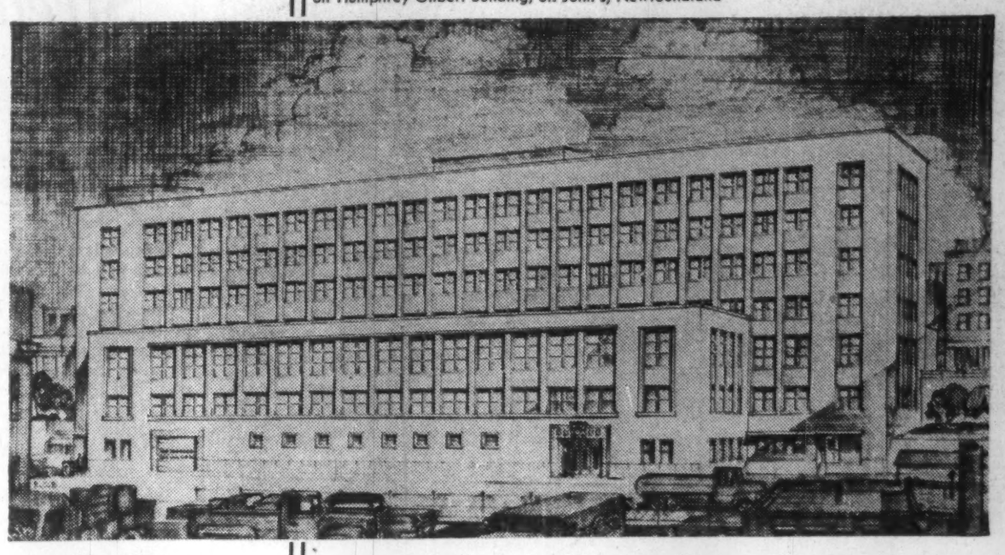

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BUILDING THROUGHOUT EASTERN CANADA

ARGO CONSTRUCTION LTD

Montreal St. John's, Newfoundland

Wood Council Expands Promotion Plan

Canada's lumber and wood industries are to boost their products.

Fourteen regional associations, representing some 3,000 member companies, recently agreed to incorporate the Canadian Wood Development Council and carry out an expanded program of trade promotion and technical services.

Plans are now well-developed for an aggressive campaign to be launched in Canada.

To help sell architects and building contractors on the merits of wood construction, leading Canadian trade journals will carry CWDC advertising every month of the year.

This hard-hitting promotional campaign will be backed by an enlarged technical field program. Representatives of CWDC will call on building code officials, architects and builders to see if any technical assistance can be given concerning the use of wood.

Co-operation with the forest products laboratory and the division of building research, National Research Council, will be maintained and strengthened with a view to assisting in national building code matters.

Three new positions have been created within CWDC which will be filled by qualified men to assist executive director G. C. Edgett and technical director H. E. Thompson.

These are the organizations which support CWDC:

Alberta Forest Products Association.
British Columbia Lumber Manufacturers Association.
British Columbia Lumber Wholesalers.
Canadian Lumbermen's Association.
Cariboo (PGE) Lumber Manufacturers Association.
Consolidated Red Cedar Shingle Association.
Interior Lumber Manufacturers Association.
Maritime Lumber Bureau.
Northern Interior Lumbermen's Association.
Plywood Manufacturers Association of British Columbia.
Quebec Lumber Manufacturers Association.
Quebec Wholesale Lumber Association.
Saskatchewan Timber Board.
Wholesale Lumber Dealers Association.

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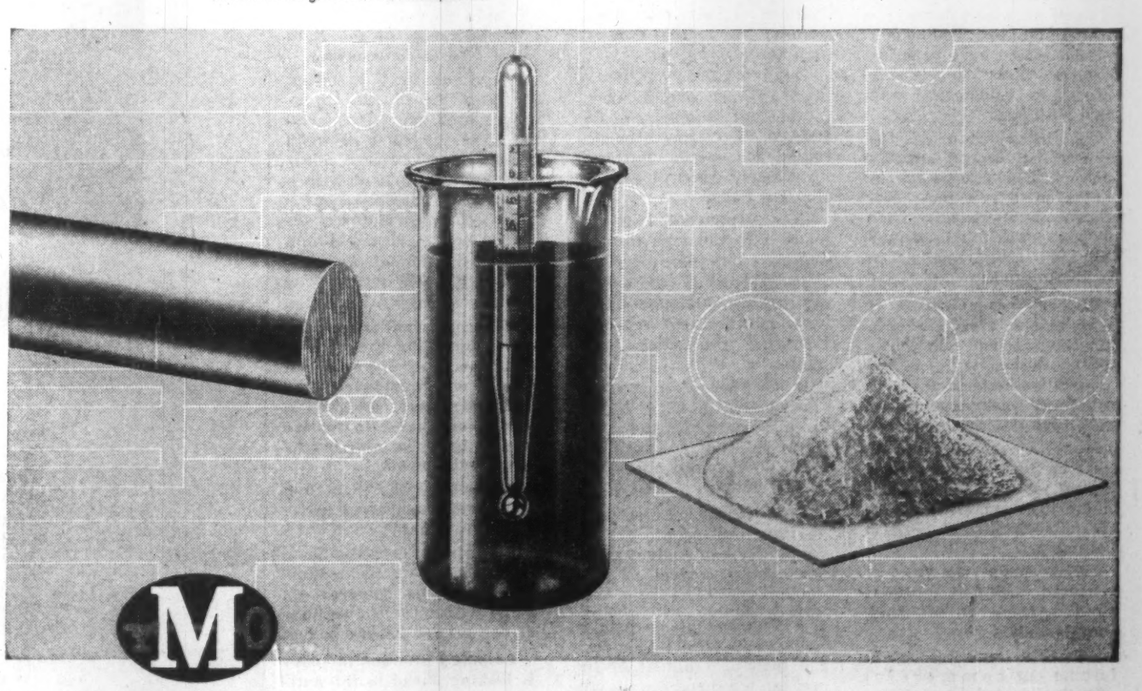
In steel, petroleum and chemicals, profits begin with plant design. A profitable plant must be designed and built to operate efficiently now and for many years ahead—must have the built-in flexibility to meet future conditions. It must produce at rock-bottom operating cost and require minimum maintenance.

If that is the kind of plant you need call in McKee. You'll find McKee engineers get things done—done right and on time. That's the result of many years of world-wide experience on projects like yours. McKee will convert your plant *cost* into profit-earning *investment* at the earliest date—give your profit column a head start.

McKee Building, Cleveland Headquarters

ARTHUR G. McKEE & COMPANY OF CANADA, LTD.,
Terminal Bldg., Toronto



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McKEE ENGINEERING AND CONSTRUCTION SERVICES

DRAMATIC USE of fir plywood for engineered components is shown in this Burnaby, B.C. supermarket. Plywood folded plate roofs incorporate insulation, sprinklers, heating ducts.

Plywood in Big League Of Building Materials

Plywood has an exciting future.

Douglas fir plywood, a spectacularly successful building material, seems more than ready to join the big competitive league to battle for new and bigger markets in the construction industry.

Plywood has kept on top of its opportunities. In the 1930s when the industry was very young in Canada, plywood manufacturers decided to swing over from soy bean glues to the new hot press resin bonded method of plywood production, which produced a product with a completely waterproof glue line suitable for interior or exterior use.

In the U. S. the industry was already well established and many mills were reluctant to spend money on the plant change-overs.

As a result, less than 50% of the plywood made in the U. S. today is of the versatile "exterior glue" quality which has been the main reason for the tremendous expansion of the plywood industry in British Columbia.

Despite this advantage, the Canadian plywood industry is facing greater opposition than ever before from the industrial giants — aluminum, steel, composition building boards, and in some cases, lumber itself.

Competition is made more acute because of the drop in the number of housing starts.

This was caused particularly by less mortgage money becoming available and partially because of a falling off of the anticipated increase in family formations across the country.

But the rewards of victory in the struggle for new markets can be great for the plywood industry. Already plywood engineers have developed building component systems which have been introduced with considerable success in commercial and farm buildings.

The introduction of the plywood-engineered component is looked on as being one of the industry's most significant developments since plywood was first manufactured commercially in North America.

Plywood's combination of light weight, great strength, area coverage and easy workability makes it a highly competitive material for such structural components as wall, roof and floor sections.

Much of the engineering research has been carried out by the technical department of the Plywood Manufacturers Association of British Columbia.

Hand-made Douglas fir veneered stock first appeared on the scene at Portland, Ore., in 1905.

By 1910, machines were turning out commercial quantities and the new product of the West Coast softwoods was being used in piano and some furniture manufacture.

More uses for fir plywood were developed in the 1920s.

The material appeared to great advantage in manufacture of panel doors.

It has remained a staple door manufacturing material, although currently inroads into this traditional fir plywood market are being made by hardwood plywood imported from Japan.

The development of the waterproof gluing process during the 1930s opened up new fields of application for plywood in Canada.

It became an all-purpose construction material that could be used in any condition of moisture or humidity without the danger of delamination, which had been such a bad feature of the old-fashioned "interior type" plywood.

For instance: It has found a ready market for boat building, concrete form work, house sheathing, exterior cladding and scores of industrial uses from pallets to linings for commercial refrigeration plants.

Giant Douglas firs are grown in British Columbia where 13 plants convert the logs into plywood.

The 10 member companies of the Plywood Manufacturers Association of British Columbia produce all of Canada's waterproof-glue Douglas fir plywood, which is about 85% of the nation's total plywood production.

In 1950, these fir plywood producing companies formed the PMA of B. C., an organization whose activities cover product standardization, general promotion, advertising and technical research.

Despite the fact that 1959 was a troubled year with a 10-week strike of woodworkers, production of fir plywood was 1,119 million sq. ft. (measured on a 5/16 in. thickness basis).

In recent years, closer utilization of the forest resource has led to some production of plywood made from western softwoods other than Douglas fir.

This "western softwood plywood", also manufactured by member companies of the PMA of B. C. has been accepted for specific purposes by Central Mortgage & Housing Corp.

Like fir plywood, it is also made with phenolic formaldehyde resin glue.

The industry's extraordinary marketing advances have been matched by improvements in production techniques.

B. C. plywood men claim their plants in British Columbia represent the most technologically advanced group of plywood operations in the world.

One important advance has been in adopting electronic devices to give accurate quality control in production.

• **Plywood plants employ huge steam driers** to reduce the moisture content of the wet sap wood and the slightly drier heart wood in veneer form.

The control of this moisture content to 5% is necessary for perfect hot press gluing conditions.

• **At this stage of production,** electronic moisture detectors reject veneer that is not adequately dried. The result of this control is reflected in the consistent quality of the plywood's final bond.

• **High frequency edge gluing** is another development which enables plywood plants to make greater use of good quality, narrower strips of veneer.

• **Advances in sanding and patching** techniques have also led to a better and faster finished product.

Supporters of forest conservation look favorably on plywood production. Overmature trees, often as old as 500 yr., are logged expertly to provide a high degree of recovery in the form of plywood.

Other trees, cut on a planned sustained yield basis, are carefully graded so that log types that can be more economically converted to plywood than to sawn lumber are channelled to the plywood plants.

At plywood plants and sawmills there is virtually no waste.

Veneer trims are converted to pulp chips or pressed to make fireside "logs".

Who uses fir plywood?

The greatest single consumer is the builder.

In house building, the versatile material is used mostly for wall sheathing, subfloors and roof deck. Sanded grades go into kitchen cabinets, decorative panelling, carpet underlayment, cupboards and built-in features.

In heavy construction it is most noticeable in the form of job fences, temporary buildings and concrete forms.

Recent technical developments have assisted the farmer to make greater use of plywood for his buildings.

Most significant of these has been the introduction by PMA engineers of the rigid frame type of construction.

This structure is based on the principle of the three-hinged arch using four lumber pieces nailed to plywood gussets to give large, clear span arches. Covered with a self-bracing plywood "skin," the resulting structure gives the farmer an ideal building for housing animals, poultry, machinery and for general storage.

The same rigid frame idea was adopted by the Federal Department of Northern Affairs which, aided by the PMA engineers, designed a fir plywood house to replace Eskimo igloos in some northern developments.

Several of these, costing about $400 each, were erected at Frobisher.

Rigid frame construction is even being featured for summer cottage construction, along with more conventional designs for leisure homes.

Canada's plywood industry is looking ahead to the anticipated splurge in this leisure home building field.

Already plywood plays a big part in the family weekend and vacation recreation because of its use for boats and trailers.

And, of course, the man of the house uses plywood in his do-it-yourself workshop.

Streamline Bid Processes And Keep Your Costs Low

Streamlining operations within the building organization, particularly in the bidding processes, keep construction costs down.

Independent quantity surveying will help to do this in a big way.

Much is heard about this profession these days. It won't cure all ills but it will certainly help control rising costs and tend to stabilize an industry.

Quantity surveying is mainly a postwar development in Canada.

What it does: Effect efficient financial control of construction contracts by means of bills of quantities (a labor and material analysis of construction projects).

Building owners in Canada have already started to use this service which is being introduced by several highly specialized firms.

Where can it help the industry most?

Business, industrial and heavy engineering construction are the sections where the quantity surveyor can be most useful, **G. A. Hanscomb Partnership,** Toronto, Canadian subsidiary of a long-established, major English quantity surveying firm told **FP.** These categories comprise close to 50% of the total $7,202.2 million construction bill in Canada.

With the nation's contractors competing hard for a slice of this figure, a vast amount of money will be spent by them just in bidding for contracts.

Bidding costs to the contractor is no mean sum. It's estimated that bidding costs on the largest of engineering contracts can amount to as much as $100,000, requiring use of a large amount of skilled engineering talent.

A considerable percentage of the vast amount spent by each and every contractor on his estimating is allocated to the purely repetitious process of measuring quantities, quantities which for any given contract are identical (when measured correctly) and which forms the basis for submitting bids.

Why, in a country which prides itself in being one of the world's most advanced and forward thinking, is this repetitive chore not eliminated by the industry and put in the hands of competent specialists, properly trained to measure and present construction quantities in a logical manner understood by the industry?

One answer is that competition is not only in the price but also in the quantities — and upon the accuracy or lack of same, the job is secured but for those who believe in this theory quantity surveyors warn: "You get exactly what you pay for"!

Excellent site supervision on a contract secured on a low quantity take-off can help to eliminate poor construction — but it has to be stringent — is consequently expensive and can only lead to unhappy relationships between all parties — including the sub-contractors, quantity surveyors say.

An answer to this problem is for the building owner to retain and utilize the comprehensive services which a quantity surveyor can bring to the contracting parties.

At the start of the 19th century, construction companies in the U. K., faced with a growing complex industry and increased competition, found that they were bidding for more jobs than they could reasonably secure.

They started to streamline their procedures and, as part of this natural development, all contractors bidding on any one job banded together and employed one man to compile the material "take-off" —thus saving themselves a considerable amount of expense in their own offices.

Each contractor received a copy of the "take-off" and from that was able to price his bid. The fee for the take-off incidentally was added to the successful contractor's job total, once the contract had been secured.

The bidding contractors saved office overheads and the building owner paid for the one "take-off" for his own building only, the contractors hidden element of expense for previous contracts bid and lost being eliminated.

Towards the second half of the century, the system was working satisfactorily and the next logical development was for the client to pay the fee of the "take-off" man direct — instead of including it in the construction project total.

The reason for this was that with his "take-off" knowledge of the building the owner could further utilize the specialist's experience to adjust changes by measurement and also to advise on alternative costs and materials for construction.

Such a service as this has proved of great value to all parties to the contract and subsequently has spread to virtually all English speaking countries of the world and is today also in use to a limited extent on the North American Continent. Here, its services are being tried and found of value by several responsible and advanced thinking organizations.

It may seem to the general business man reader that this service is of concern to the contracting side of the industry only. This is not so. Knowledge of costs and the independent advice on financial control of construction projects is of prime importance to the building owner and his architect.

As the elaborate and comprehensive pre-contract advice and estimates is just one of the services offered by the quantity surveyor, architects in Canada are well aware of this and several retain the services of such a specialist.

Other members of the architectural profession are of course quite happy to get along on the square foot and cube foot methods of estimating — a hit and miss system at the best of times, according to quantity surveyors.

They feel that this is a service which can be of great value to the construction industry in this new decade which heralds great advances construction wise to the industry.

Excessive tendering on many projects by construction firms is certainly not good for the client nor for the industry for that matter.

The Gordon Report says that "it can only in the long run raise costs."

Someone has to pay for the bidding overheads of the jobs that a contractor loses.

By the payment of a fee to a quantity surveyor, the client pays for his own project "take-off" only and receives a service of pre-contract cost advice and actual financial contract control.

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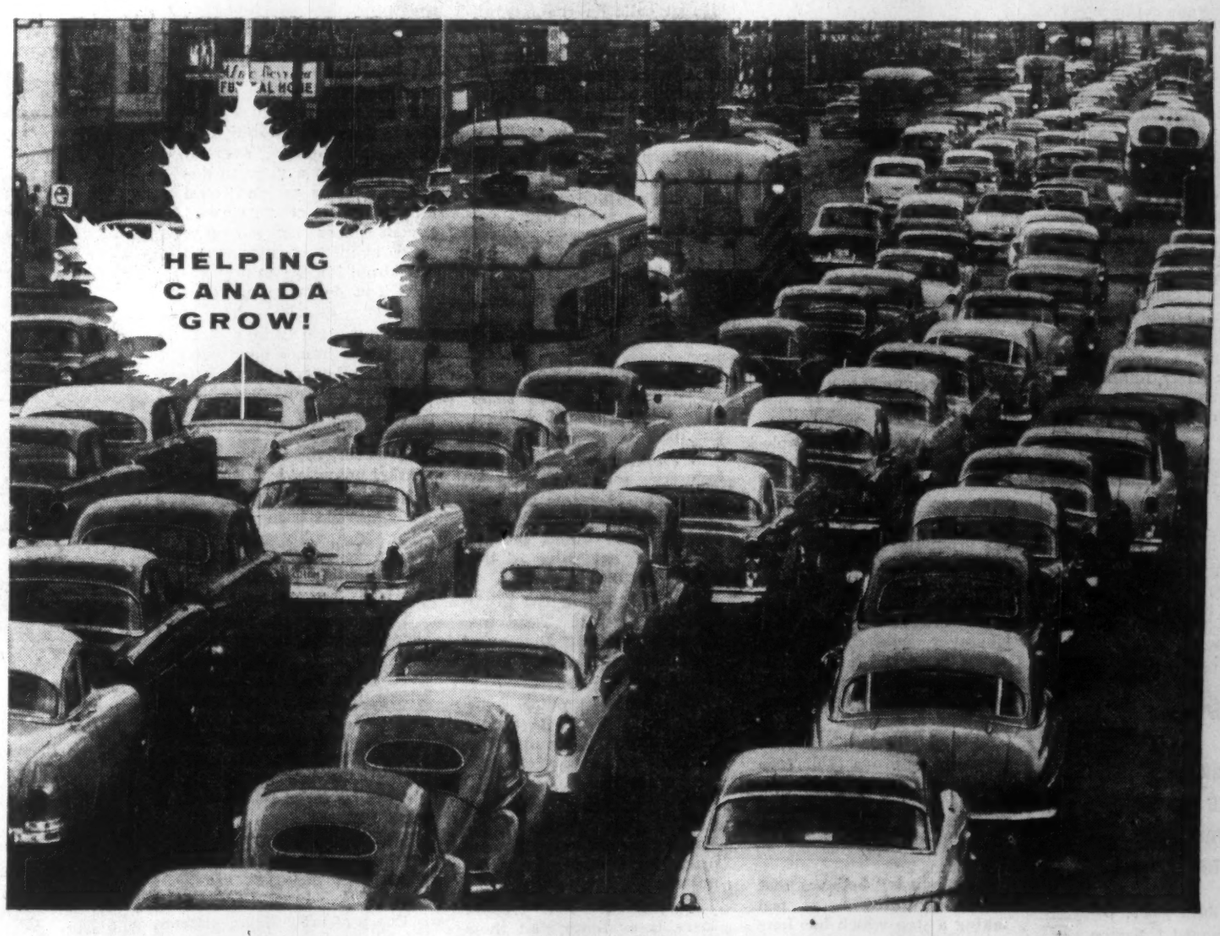

AUTOMOTIVE CANADA IS BUSTIN' OUT ALL OVER!

Perhaps no other field reflects the dynamic growth of Canada as vividly as the automotive industry. Last year, for the fourth consecutive year, Canadians invested more than one-billion dollars in new car and truck purchases. As an important contributor to the motoring world, Bendix-Eclipse feels gratified with this continuing growth that has made Canada one of the most progressive, fastest-growing nations on the globe.

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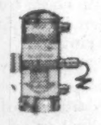
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Concrete Block, Pipe, Mix All Register Output Gains

Substantial production gains were registered by the Canadian concrete products industry last year.

Industry expansion continued in 1959.

Concrete block production increased an estimated 10 million units to 165 million.

Concrete pipe passed the million-ton mark, up from about 800,000 tons to an estimated 1.1 million tons.

Ready-mix concrete production jumped from about 6.8 million cubic yards to about 8.8 million.

The one exception to the uptrend was the concrete brick section of the industry, which is most closely connected with residential construction.

Mirroring the smaller number of residential starts last year, production declined by about 18 million units, estimated, over the 165 million posted in 1958.

Cement production, already at a level adequate to serve the industry's needs, promises to be raised still higher when **Miron Cement Inc.**, Montreal, begins producing two to four million barrels per ye

Perhaps the biggest single preoccupation of the industry in 1959 was with standards, codes and specifications.

A Canadian standard for concrete block will be completed in final draft form early this year. It has been under preparation for several months by a subcommittee of the National Concrete Products Association.

Tests are now under way on concrete brick to determine drying and shrinkage characteristics.

Once these are completed, the information will be incorporated into the final draft of a standard on concrete brick now being prepared by another N.C.P.A. subcommittee.

A Canadian standard on precast-prestressed concrete is nearing completion in its final draft form.

New specifications covering concrete pipe in Ontario were recently published, based on research by the Ontario Concrete Pipe Association. This research indicated the urgent need for updating existing standards to suit Canadian climate and building conditions.

One of the most striking developments in the prestressed concrete field is the introduction to eastern Canada of the Single Tee unit.

Two manufacturers planned production of the new unit, and one company, **Wilson Concrete Products Ltd.**, Belleville, Ont., already has it in production.

Company based its bed on a modification of a design by Professor T. Y. Lin, California, one of the world's foremost authorities on prestressed concrete.

Pressure Pipe Ltd., Montreal, planned installation of a new bed to produce Single Tee units this winter.

The new units will be much different than those presently in production. Widths will be up to 8 ft.

They are expected to have a particular application in bridge building, and in construction where they are exposed units in the ceiling.

With only one stem every 8 ft., a clean uncluttered effect will ensue.

Two more companies already established in the concrete products field—**L. E. Shaw Ltd.**, Halifax, and **Lundrigan's Concrete Products Ltd.**, Corner Brook, Nfld., — joined the ranks of prestressed concrete manufacturers in 1959.

An interesting sidelight was the first attempt in Canada at prestressed concrete erection by helicopter.

During construction of a $4.5 million sports centre last year in Maisonneuve Park, Montreal, **Porete Co.** actually placed one unit by helicopter.

The units were suspended on prestressed steel cables, and the company hired a helicopter to speed construction. But the experiment was abandoned because of possible risk to the public.

Long-range benefits can be expected in the design and use of prestressed concrete as a result of a demonstration and lecture tour of the U. K., arranged by **Supercrete Ltd.**, St. Boniface and Winnipeg, now in progress.

The company chartered a plane to fly several architects and engineers to England, to study advanced methods of prestressed concrete design and construction. Arrangements were made for seminars and field trips through the Cement and Concrete Association, with headquarters in London.

British and European techniques for the manufacture and use of prestressed concrete are in advance of those in Canada, because of the much longer period it has been in use.

Its history in Canada covers about five or six years. It was introduced here by engineers who had used it in Europe.

In the field of concrete block, face designs recently introduced in Canada continued to gain acceptance in commercial and industrial construction.

In residential building they are catching on more slowly, possibly because the manufacturers making decorative block sell principally for commercial and industrial use, and have not actively promoted decorative block for homes.

A new decorative architectural or screen block has made its appearance on the west coast. It can be laid up in open lacework walls of distinctive beauty.

Its major use will probably be for nonload-bearing outdoor screening walls.

Most manufacturers will probably eventually stock four or five different types of these blocks, in addition to their many regular lines.

A proposed amendment to building regulations that might have been adopted in several Canadian cities caused block manufacturers some concern last year.

The amendment would have prohibited use of 10-in. block for basement construction in Toronto. Ottawa and Winnipeg would probably have adopted the same regulations, and other Canadian cities would have followed suit.

Block manufacturers in Toronto carried out a survey on concrete block basement failures in their area.

They were able to demonstrate that the number of failures in the last 25 yr. has been negligible, and that poor construction practices, not failure of the block itself, had been the cause in almost every case.

They pointed out that production and construction costs would be increased unnecessarily if the amendment were adopted, and that manufacturers would be forced out of business.

They were successful in having the amendment changed.

Concrete brick manufacture has been moving steadily toward a lighter, more colorful unit in the past few years.

Experiments with lightweight aggregates have proved successful, and such units are becoming popular across Canada.

A true roman size — also called ribbon brick—12 in. x 1⅝ in. — has made its appearance in Canada. This size has been available until recently only in imported units brought in from the U. S. at a relatively high cost.

Use of new aggregates has improved quality — fire resistance, texture, color and ability to reduce the level of reflected and transmitted sound are all improved.

At present new curing methods to further improve quality are being introduced, and will probably become widespread.

Concrete pipe manufacturers continued to increase their fund of technical knowledge in 1959.

New specifications based on up-to-date research and a new specification developed by the Ontario Department of Highways have resulted.

The department consulted the Ontario Concrete Pipe Association, and worked in close conjunction with them to arrive at their new specifications.

Negotiations are still being carried on to effect a liaison between the National Concrete Products Association and the Ontario Concrete Pipe Association.

It is possible that a basis for settlement will soon be arrived at. Membership in both organizations increased last year.

Indications are that purchase of new machines and parts for manufacture of concrete block may be curtailed this year with the imposition of an additional 15% duty last November.

Although a Canadian block machine is on the market, parts must be imported for eight different U. S. models. The parts are not available in Canada.

Due to the abrasive nature of the materials used, parts on block machines wear out relatively quickly and the value of parts sold exceeds the amount spent on machines themselves.

$300 Builds Shelter From Fallout

Concrete block was recommended for the construction of inexpensive basement fallout shelters by Canadian government agencies when civil defence authorities met in an Ottawa conference last fall.

For about $300, a basement shelter could be built by an inexperienced handyman that would shelter a family of four, said the government.

Plans were released by the Canadian Army which stated that they had been drawn up by a committee from various federal government departments and agencies.

Recommendation was that the shelter be built in a corner of the basement, with two walls formed by the existing basement walls.

The shelter was designed to protect against fallout only, and would not sustain a direct explosion.

Concrete Goes Arty In Winnipeg

Precast concrete made its debut as a major art form in 1959, with four works in Winnipeg's Polo Park shopping centre.

The artistry:

- **A giant sundial.**
- **A mock wall** in concrete.
- **Two abstracts of cocks** crowing at sunrise.
- **An owl** in flight.

The sundial and abstracts were created by Jim Willer, Winnipeg artist, and the mock wall by Prof. R. E. Williams, director of the University of Manitoba school of fine arts.

A Winnipeg firm of architects, **Green, Blankstein & Russell**, commissioned the artists to create the works. They were given a free hand.

The giant sundial tells time accurately, and the abstract figures — concrete blocks hung on steel cables — act as dividers and point directions.

Tool Simplifies Cutting Concrete and Hard Metal

A new tool makes cutting through concrete, metal or any other known hard material comparatively simple.

It will pierce materials of any thickness that were formerly difficult or impossible to pierce by other methods, maker claims

It was used recently to burn through 18 in. thick reinforced concrete flood walls as part of a demolition job on the Susquehanna River in the U. S.

Now introduced in Canada by **Linde Co.**, division of **Union Carbide Canada Ltd.**, the Oxweld ACL-4 powder lance is expected to have many uses in the construction industry in Canada.

The Susquehanna job involved removal of the two 17-ft. high flood walls.

Two vertical cuts were made in each of the two sections to be removed and a hole was then pierced in each of the resulting sections slated for removal, so that cables could be run through the concrete.

As each section was secured by a crane, a horizontal cut was made across the base of the secured section making it possible for the crane to lift it away.

Engineers at the site estimated the cutting speed through the 18-in. thick concrete to be approximately 2-3 lineal ft. per hr.

With the new lance, it was also possible to pierce a hole through the 18-in. thick wall in 2 min. 30 sec. or at a speed of better than 7 in. a min.

Accurate control of intense heat is the key to operation of the new power lance.

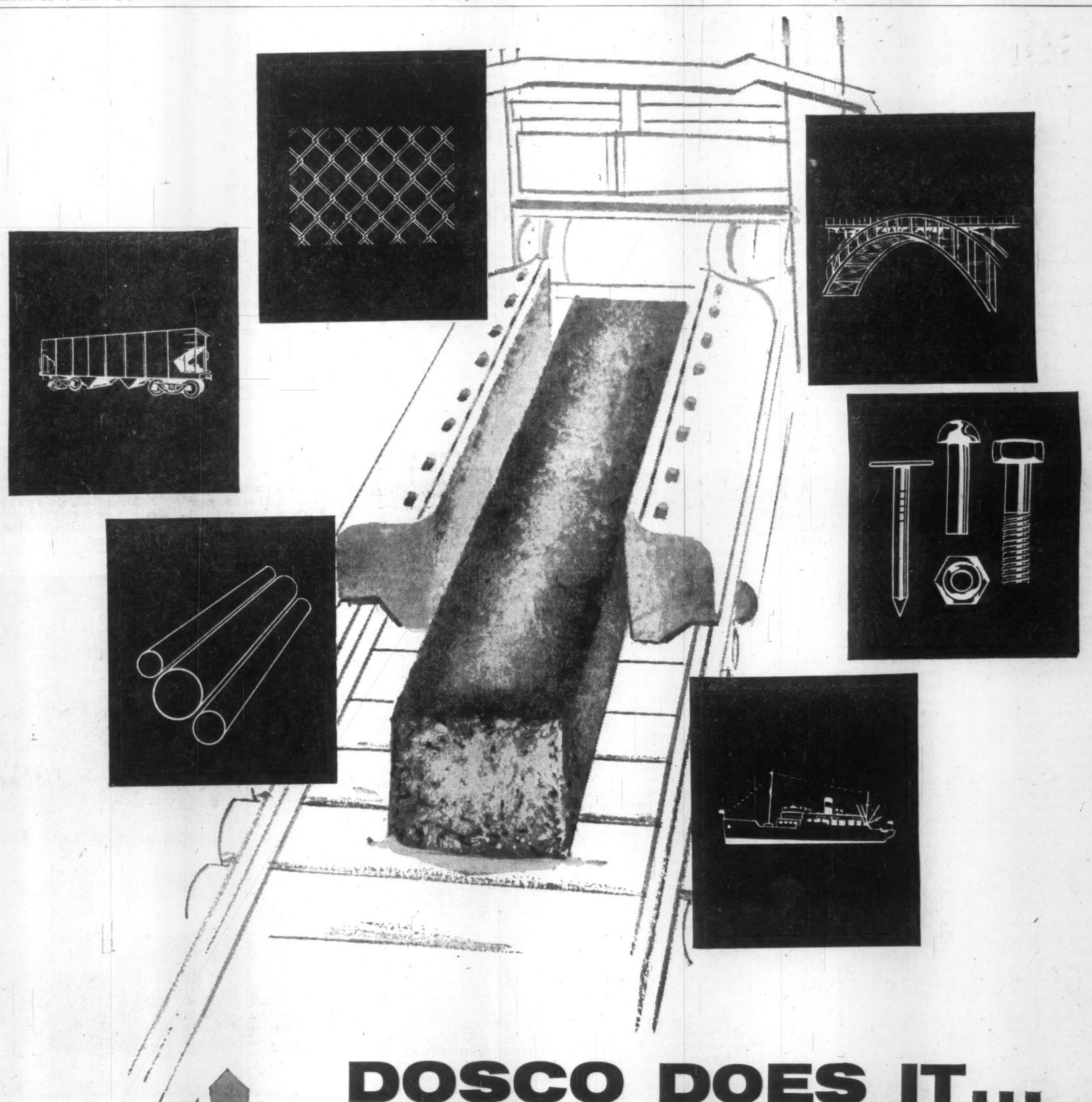
Lengths of standard black iron pipe are fitted into the front end, which is connected to an oxygen supply and a source of special Oxweld metallic powder mixture.

The oxygen and metallic powder are mixed in the pipe and carried to the material being pierced or cut by the consumable pipe.

This mixture is ignited at the end of the iron pipe, producing an extremely high-temperature reaction, estimated at approximately 8,000 deg. F. It melts both ferrous and non-ferrous material in its path.

On materials such as concrete, a recently introduced special mixture of iron and aluminum powder known as Oxweld No. 201 lancing powder is used.

Aluminum powder added to the metallic powder further intensifies the cutting reaction making it possible to slice through thick concrete.



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Fabrication

Steel Construction Soaring

This year looks like one of Canada's best steel construction periods.

Next year may even be better. The future looks bright for both steel supply and competitive steel prices.

"In 1958 the steel fabricating industry had average monthly shipments of 41,000 tons.

"In 1959 this figure rose to 47,000 tons, an increase of 15%.

"During 1960," D. C. Beam, general manager, Canadian Institute of Steel Construction Inc., told FP, "we expect that monthly shipments will be 8% to 10% higher than in 1959, or around 51,000 tons."

Of the total monthly shipments, three quarters of the tonnage is for structural application and the remaining quarter goes into platework, principally storage tanks, pressure vessels and large-diameter steel pipe.

Structural application includes structural steel framing for buildings, bridges, etc.

Biggest single month in 1959 was July with shipments amounting to 60,800 tons (39,800 tons for structural use, 21,000 for platework).

Highest month for structural steel bookings was October at 60,600 tons while for platework the highest monthly booking was recorded in April, amounting to 21,300 tons.

"The backlog of work increased from 189,000 tons in December, 1958, to 275,000 tons in December, 1959," said Beam.

"The Canadian steel fabricating industry as a whole was affected very little by the long U. S. steel strike, although some heavy structurals were on the critical list for a time, and, for a few jobs, were delayed by the duration of the strike."

- **Price outlook: It's unlikely that there will be an increase in mill price of structural steel sections in 1960.**

Wage increases won by U. S. steel workers aren't effective until 1961 and fringe benefits will be absorbed by the usual productivity increase.

Canada is in a relatively strong position.

British and European mills are supplying wide flange sections and are becoming fully competitive as regards both price and quality. Practically all of our plate and angles are made in Canada and a wide flange mill is now being built.

Canadian fabricators spent a lot of money building up yard stocks in anticipation of the U. S. steel strike which would cut off a major material supply source.

As well as using the Canadian basic steel industry to its full extent, alternate sources of supply in Britain and continental Europe were investigated.

In consequence there was no panic and no "grey market" due to shortages developed, such as occurred in 1956.

Canadian construction was well served by the steel fabricator in 1959.

CISC, which has its finger constantly on the heartbeat of the industry, is prepared and willing at all times to provide owners, architects, consulting engineers and contractors with a realistic analysis of the steel supply situation as it applies to their needs.

THE OLD and new in steel construction. Two pedestrian bridges over the Don River, Toronto.

Periodically since World War II, steel fabricators have been plagued by shortages due to inadequate mill-rolling facilities.

Although this was recognized by the basic steel producers, increasing their production by building new plants took time, money and steel that was badly needed elsewhere.

It was not until 1958 that North American rolling-mill capacity could exceed the potential demand for structurals. As demand continues to increase, steel production will probably have to expand even more.

Canadian mills are right now expanding production facilities, including a mill to roll wide-flange structural shapes, the most popular of all the structurals.

Supply of Canadian plate has already been increased so that demand can be met easily.

Adding incentive to Canadian steelmakers' efforts to increase production is the awakening interest of European producers to sell steel in North America.

Supply, delivery and quality from overseas sources is steadily improving and is fast promising to be the sharp spur to the flank of our own steel producers.

With material in good supply the architect, engineer and owner will continue to think in terms of steel, say steel construction men. Eight of the 11 "best in 15 years" Canadian buildings chosen by a selected panel of architects have been of steel-frame construction.

Competitive materials, which developed and made inroads on the market during every period of steel shortage, are trying to challenge the dominant position that fabricated steel has enjoyed for 60 years.

The entire fabricating industry is aggressively meeting the challenge and will do so even more intensively in the future.

As one industry spokesman put it: "Fabricated steel is not out to hold its market, it's out to expand it."

The industry backs up this attitude with an enlarged campaign aimed at increasing the use of fabricated steel. The program includes:

- **Technical development.**
- **Effective promotion.**
- **Honest, hard selling.**
- **Public goodwill and confidence.**
- **Competitive pricing.**

A leading fabricator interprets it this way:

"You may have the best product on the market but, unless you can convince the buyer or his technical representative, what good does it do you? And let's face it, the buyer is interested in cost as well as quality."

Another fabricator says:

"The owner must be made aware that the fabricating industry is selling a service as well as a product. This service is one of the intangibles that's mighty important."

An information centre is a service that the industry has developed successfully. It operates through its trade asssociation, the key Canadian Institute of Steel Construction, Inc.

Engineering articles are written, on request, for leading Canadian professional magazines. A film service is operated for group showings across the country.

CISC staff is also responsible for co-ordinating apprentice training with provincial departments of labor, as well as preparing industry statistics.

A main concern of the institute is the promotion and maintenance of high standards of workmanship for the industry. All but one of the 40 or more major Canadian structural and plate fabricators are members.

The published code of standard practice for buildings covers such subjects as: general standards and responsibilities; calculation of weights for unit-price bids; material; inspection and delivery; fabrication and erection.

CISC is actively encouraging the wider use of the code to promote a general improvement of the contractual relationship by clearer understanding and copies are available to all interested parties.

CISC co-ordinates most of the technical development work for the industry.

Derek Tarlton, development engineer for CISC, told **FP** that a new specification for structural steel for buildings is in progress.

This ties in with recent research on steel columns, composite construction, plastic design of steel and new fastener methods.

In addition, much time and thought has been put into new constructional steels slated to make their debut shortly.

Ordinary structural steel has also come under scrutiny to see whether its strength properties can be increased economically.

General manager Beam told **FP**:

"After careful consideration of the trend shown by the Dominion Bureau of Statistics tonnage reports, and by the assurance of no material shortage, we think 1960 will be a good year for fabricated steel.

"We don't pretend competition from other materials won't exist, but we do think we can show owners that every dollar spent on structural steel is a bargain in the long run.

"The industry is competent, aggressive and competitive. These factors are the powerful combination that will ensure us a high level of business."

Buildings Get Steel Facades

The same lustrous metal that is so practical for automobile trim, kitchens and many other applications, has great architectural appeal, too.

Last year witnessed a decided increase in the use of this metal for a variety of building applications.

Stainless steel is no longer confined to doors, elevators and ground-floor features where its resistance to traffic abuse is unsurpassed.

It's now climbing the facades of buildings to provide permanent protection against the weather.

In 1960, many new buildings will take shape, employing stainless steel curtain walling, windows and mullions, etc. Ground-floor applications will also appear in greater numbers.

On Montreal's famous Dorchester St., the new 26-story **Quebec Hydro** building and the 42-story Windsor Plaza, both now under construction will feature stainless steel on their facades.

In Montreal's old downtown financial district, a new **Toronto-Dominion Bank**, 12-story building will display sparkling spandrel panels and ground-floor metalwork of stainless steel.

At Place d'Armes, a 16-story addition to the **Bank of Montreal** is nearing completion. While not of modern stainless steel curtain wall construction, it employs over 20,000 lb. of stainless steel in numerous applications — exterior entrances, windows, window boxes, clock, interior lobby trim, railings in kitchen and cafeteria equipment.

Important new buildings now being built in Toronto will wear outer skins of stainless steel and glass.

The architects of several other large building projects now being designed in various parts of Canada, are giving favorable consideration to the use of stainless steel for exterior metal features.

Atlas Steels Ltd., Canada's only basic producer of stainless steel in flat rolled form, recently completed a new warehouse on Ellice Ave., Winnipeg.

An industrial type stainless steel insulated curtain wall designed at Princeton University was developed for the first time by **Rosco Metal Products** and applied to this building.

It comprises an outer skin of light gauge textured stainless steel in the form of concave panels 16-in. wide. An inner pan-shaped panel contains fibre glass insulation.

This new form of industrial curtain wall construction has excellent appearance with extremely long life, comparatively low cost, and freedom from maintenance.

The International Nickel Co. of Canada has pioneered a development in stainless for smaller buildings.

A hospital and municipal building in the new town of Thompson, Man., utilizes prefabricated insulated window wall units.

The increased acceptance of stainless steel as an architectural material has prompted the producing industry to exemplify its use by the medium of motion pictures.

Commercial applications, together with the pioneer developments of the industry, will be depicted in two films now in the course of preparation. These will be available later this year.

Stainless steel is the most durable metal in building construction, the industry claims.

It is competitive with monel metal, copper and anodized aluminum. In many applications — where these metals are used, stainless steel proponents claim their product can provide equal satisfaction, often at lower over-all costs. The use of stainless steel for copings, flashings and many other such sheet-metal components has yet to be effectively promoted.

With appropriate equipment, stainless can be readily cut, formed and welded. It can be soldered without difficulty.

The techniques of working stainless are different from other metals. This knowledge is being acquired by an increasing number of fabricators, who realize the potentiality of this material.

Atlas Steels Ltd. of Welland, Ont., has recently introduced a new line of special finishes under the trade name Texdur. These finishes are imparted to coiled strip after the final rolling operations.

Texdur No. 10 is a fine line satin finish, not highly reflective. It is ideal for exterior and interior metal-work such as curtain wall members windows, sills, moldings, etc.

Texdur No. 11 is finely embossed finish having an irregular lacey pattern. It was designed to minimize reflectivity and present a surface which can withstand an unusual amount of abrasion without revealing the surface marking. In other words — it doesn't show scratches.

Texdur No. 11 will be favored by sheet-metal workers for copings, flashings, rainwater fittings and a variety of sheet-metal work on buildings wherein special care in protecting the surface during fabrication and installation is not warranted.

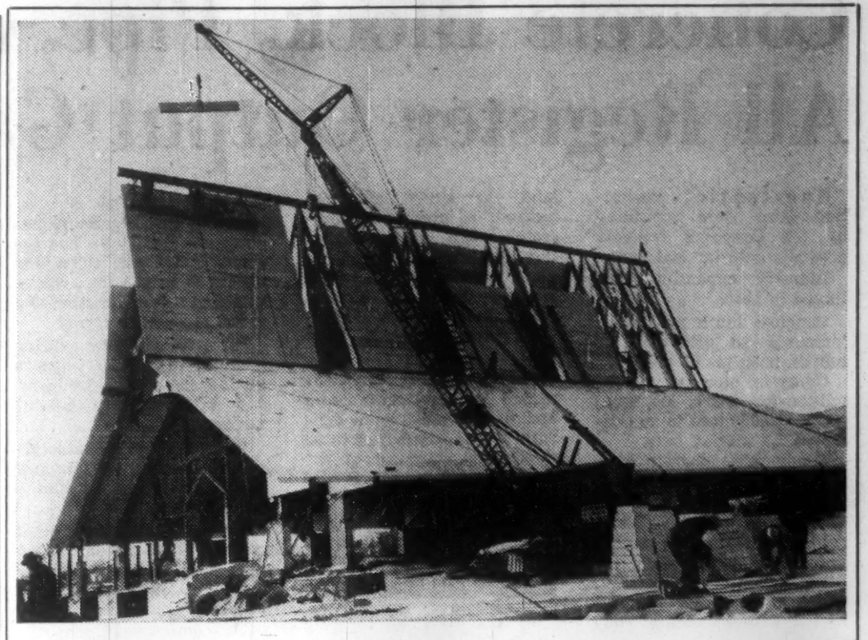
In the U. S., the stainless steel producing industry reports a continuing expansion in the use of stainless in building construction.

Among the many new buildings throughout the country which employ stainless for curtain walling, the latest **Equitable Life** Building, in Pittsburgh, Pa., is taking shape.

Some 250 tons of stainless steel will be required for curtain wall mullions and to sheath the service core of this 22-story building.

The stainless sink market has expanded greatly in recent years and has become such an important factor in plumbing that a Stainless Steel Fixture Council has been formed by the plumbing industry.

Forecast: Seven out of ten new sinks in the U. S. will be stainless steel by 1970. Ontario has already passed this ratio.



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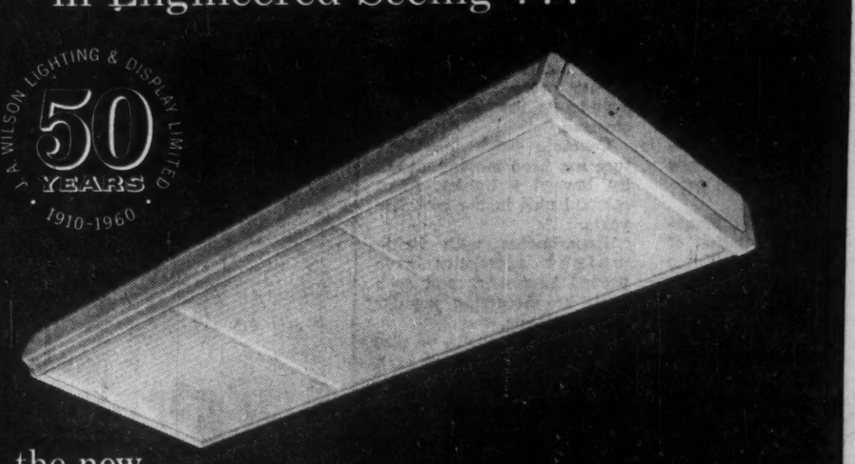

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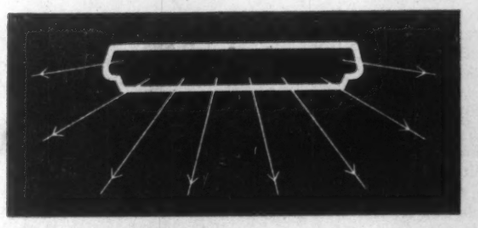

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Welded Construction Silent, Efficient, Helps Cut Costs

Back in 1947, an interesting structure began to rise silently from Toronto's University Ave.

It was the Hospital for Sick Children, a nine-story steel structure set right in the heart of the hospital area.

The interesting aspect: the noiseless method of erection — all the joints were welded — the first major building in Canada to be of all-welded steel construction.

Hospital authorities were most anxious to avoid disturbing patients in the surrounding hospitals by the racket of riveting guns used in most steel buildings up to that time.

Welding proved not only to be a silent method of construction but ushered in a new age of steel erection in Canada with many other advantages — not the least of which is a reduction of building cost.

Welding methods and equipment have been developed and have proved to be so successful that over 200 large steel buildings have been erected from coast-to-coast since 1947.

Among these are:

The 22-story **Imperial Oil Building,** Toronto's famed skyline landmark.

The plush Queen Elizabeth Hotel in Montreal.

Vancouver's new General Post Office, considered the heaviest welded building in the world.

The famous circular Stratford Theatre.

The gasometer, one of the largest all-welded gasometers in the world, owned by the **Consumer's Gas Co.** in Toronto.

Only 13 yr. ago the use of welded joints in steel buildings was viewed with caution by many contractors and in particular, by some local building authorities.

Although there were thousands of welded railway and highway bridges in existence at that time, as well as many all-welded buildings in other countries, some authorities took a conservative view of welding practice.

However, by insisting on proper safeguards and testing the Toronto building authority eventually was instrumental in setting up a quality control system which has been adopted by many municipalities across Canada.

The Canadian Welding Bureau, a division of the Canadian Standards Association, was formed to develop and consolidate a series of welding codes and specifications for building construction.

These standards are now embodied in the National Building Code.

Certification of welders and inspectors is a necessity, and building contractors must first be certified for welding proficiency before building can commence.

Paralleling the formulation of the building code has been the development of welding equipment and techniques.

Among these is the Unionmelt method developed by the **Linde Co.** division of **Union Carbide Canada Ltd.**

Welded joints made by this method have an ultimate strength equal to, and often greater than, the strength of the base material itself.

This technique is an automatically-controlled electric resistance welding process. It consists of a machine carriage, supporting the welding head, that rolls along beams or girders to the point of weld application.

The welding wire is automatically fed from a coil at the same time as the Unionmelt welding composition is supplied from a hopper reservoir to the joint.

This composition is a granulated, chemically stable, fusible mineral that acts as a flux.

The process brings near-automation to the welding technique — latest feature is an electronic governor for controlling the carriage speed.

The machine can be used for fabricating large trusses and built-up girders in the workshop and for welding joints on the building site and actual structure under erection.

An interesting application of the Unionmelt welding equipment was the fabrication of the five trusses for the new 48-story **Time-Life** building in New York City.

Four of the trusses weigh 45 tons each—the fifth about 19 tons — and are over 62 ft. in length along the bottom beam.

The problem was to weld 3-in. thick carbon steel joints to support building loads measured in hundreds of tons.

Bethlehem Steel, producers of the trusses, used the Linde Unionmelt submerged-arc welding process because its automatic operation and deep penetration made dense welded joints at high speed.

Each of the larger welded trusses, believed to be the biggest ever of all-welded construction, will support a weight of over 1,200 tons in the completed skyscraper.

Welded construction offers many other advantages.

• Main one is the matter of cost.

Vertical columns and horizontal beams can be of thinner wall thickness for welded structures than if riveted joints are used.

Reason for this is that by drilling holes for rivets strength is lost and must be put back into the girder by making it of heavier wall thickness — as weight increases, costs go up.

With lighter steelwork to begin with, handling, processing and shipping costs are proportionately reduced.

Much of the steelwork for the welded building can be shipped directly from the mill to the building site instead of having to be sent to a fabricating workshop first to have rivet holes drilled or punched and perhaps countersunk.

Weight-saving affords economies in other ways.

• Easier handling by lighter trucks and less heavy cranes. In some comparable studies, weight savings of up to 25% have been evaluated.

From the strength point of view, welded joints give better stress distribution in the structure and provide superior expansion and contraction characteristics necessary to cope with wide ranges of atmospheric temperature — a particular peculiarity of the Canadian climate.

This means less cracking and chipping of plaster from the ceilings of the executive suite and the general offices in the completed building.

• Labor costs are less with welding: One welder replaces the riveting gang and the accompanying rivet furnace, the furnace minder and helpers.

Also, once a welded joint is made, no caulking or fullering is necessary to make the joint moisture proof, dispensing with the services of the caulker and the noise by pounding metal to metal with a caulking or fullering tool.

With "built-in" moisture proofing, welded joints cannot rust or corrode — reducing painting and other maintenance costs in exposed steelwork of the building.

If, at some future date, an additional structure is to be attached to a welded building, the addition can be welded to the existing structure at much less cost than if the original building had been of riveted construction.

There will be no need to remove rivets, redesign joints, and drill new holes for more rivets.

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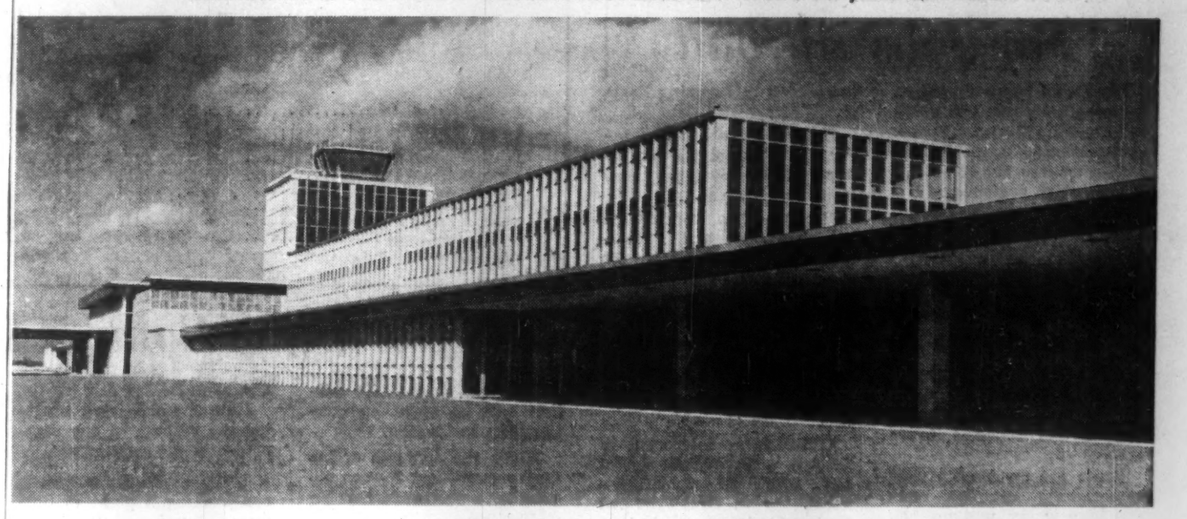

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Associate Architect: C. D. Davison and Co., Halifax.

LONDON, ONTARIO HALIFAX, N.S.

TCA's $20 Million Maintenance Base Has Biggest Single Cantilever Roof

A new $20 million aircraft maintenance and overhaul base now being constructed for **Trans-Canada Air Lines** at Dorval Airport, Montreal, will be one of the most modern and efficient of its kind in North America.

The complex of buildings, including two huge hangars, workshops, offices, service and test areas, covers 18 acres of the 84-acre site and is designed for the complete servicing of Douglas DC8 aircraft when these giant jetliners are put into trans-Atlantic and transContinental service by TCA this coming spring. It will also be the headquarters for all TCA maintenance bases.

One of the most striking engineering features of the base is the main hangar.

Engineers of **Dominion Bridge Co.** who were responsible for the fabrication and erection of the steelwork describe the structure as being like a huge "canopy"—an overhanging roof 835 ft. in length, 50 ft. above ground level and extending out from the main columns a distance of 175 ft., cantilever-fashion.

There are no supporting columns at the ends or along the entire outside edge of the roof.

It is believed to be the biggest single-cantilever roof in North America, if not the world.

Closed in by metal end walls and self-supporting rolling doors along the front, the hangar will accommodate up to five DC8s side by side and they will be able to move in and out at any location without obstruction by columns.

The roof is composed of 28 conventional trusses spaced at 30 ft. centres supported from above at intermediate points by diagonally placed suspension bars pin-connected to the top chord and to the tops of the main columns which also carry the inner ends of the trusses.

The columns are 110 ft. tall, topping the roof by 50 ft., and providing a clearance of 50 ft. underneath the trusses — the required clearance for DC8 aircraft.

The loads on the overhanging roof are balanced behind the main column by tying into the building structure which contains two floors of workshop and office space.

Another interesting feature of the roof is that it is "live." Unlike conventional building roofs it is always moving, up or down, subject to wind and snow loads and also contractions and expansions due to changing atmospheric temperatures.

Provisions for such deflections were incorporated in the design. The roof may rise as much as 13 in. or drop 15 in. at its outside edge without damaging effects.

This flexibility was accomplished by using pin connections at the five main joints of the trusses and suspension bars.

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Canadian Firms Bid For Jobs Abroad

More and more Canadian construction firms are going to be looking abroad for work in the coming years. In this article written for **FP**, *R. A. Frigon, chief, engineering and equipment division, foreign trade service, Department of Trade and Commerce, outlines what Canadian firms are now doing abroad and the construction prospects.*

By R. A. FRIGON

An increasing number of Canadian construction firms are actively taking part in construction projects overseas.

Some are on foreign sites undertaking complex construction works, while others are actively submitting tenders or looking for foreign partners with which to joint venture.

In Pakistan, the **Angus Robertson Co.** has the engineering management contract for the Warsak Dam which has been under construction since 1955 with the assistance of Canada under the Colombo Plan.

The total cost is about $60 million, including an estimated $12 million spent in 1959.

Angus Robertson also has done exploratory tunnel work on the Mangla Dam in West Pakistan.

The company hopes to promote a group to bid in June on this dam estimated at $200 million.

They have been looking at projects in other parts of the world to secure work for the experienced team developed at Warsak.

Foundation Co. of Canada has been managing and supervising construction on the Canada-India research reactor at Bombay under the Colombo Plan at a cost of $15 million.

Within the past year company has done work for **Falconbridge Nickel Mines** in the Dominican Republic.

A subsidiary company has been formed called **Constructora Dominico-Canadiense, C. por A.** For work elsewhere in the world, there is **Foundation Overseas Ltd.**

Balfour-Beatty-Provincial, a joint venture of **Balfour Beatty (Canada) Ltd.** and **Provincial Engineering Ltd.**, has recently completed construction of a pulp and paper mill for the Pakistan Industrial Development Corp., at Khulna, East Pakistan.

This mill, costing about $25 million was designed by the consulting engineering firm, **Sandwell International** of Vancouver who also supervised construction.

An interesting amount of Canadian equipment was used, including two steam generators supplied by **Foster Wheeler Ltd.**, of St. Catharines, Ont., under conditions of stiff international competition.

Provincial Engineering has been actively looking into the prospects for work in South East Asia.

Canadian Comstock Co. completed several months ago a contract for electrical mechanical work on the Panama Canal.

This company, which is also active in other parts of Latin America and the Caribbean, has formed **Comstock Interamericana S.A.**, to undertake construction in these areas.

Canadian Comstock International undertakes work in other parts of the world.

E.G.M. Cape will shortly be completing at a cost of about $4 million reconstruction of the Bermudiana Hotel burned down in September, 1958. The hotel is expected to re-open this coming Easter.

The company has also secured a contract for alterations to the Harmony Hall Hotel in Jamaica.

They also constructed beach cabanas and a residence for the hotel manager at an estimated cost of $375,000.

In Trinidad, **Waterman Waterbury** won the contract for air conditioning work at the new Trinidad Hilton Hotel at a cost of about $300,000.

Other firms interested in foreign work include **Perini Ltd.**, which has established a subsidiary in Brazil named **Perini Limitada** which is a subsidiary of **Perini International Ltd.**, set up by the Canadian company to perform work abroad.

Perini Limitada will work in joint venture with **Cementation Brazil S.A.** on the construction of an $8 million shipyard.

• What problems have these and other companies encountered in looking for work in other countries?

The contractor will be confronted with many problems that will not be much different from those he normally encounters in Canada.

But there will be added difficulties due to the foreign environment; obtaining accurate cost estimates; unfamiliar legislation and business practices, etc.

Such problems can best be solved by personal visits to the foreign sites.

Canadian trade commissioners located in over 50 strategic trading centres and officers at headquarters in Ottawa are ready to assist Canadian contractors interested in foreign work.

The contractor can look for partnerships with local firms having experience with local practices or he may seek arrangements with experienced international firms to form joint ventures.

Most firms having overseas experience are unanimous in saying that work outside Canada cannot normally be obtained without considerable travel and expense.

The need for travel can be cut down by attempting to secure contracts through sponsors located in Canada such as the Colombo Plan Administration at Ottawa and Canadian firms having activities outside the country.

There will be the added advantage that the contractor will be negotiating in familiar business surroundings.

Keeping in touch with calls for tenders requires scanning a considerable number of publications.

The Department of Trade and Commerce through the Trade Commissioner Service and the Engineering and Equipment Division regularly bring to the attention of the construction industry all projects of importance.

For instance, the department recently drew attention to a $15 million harbor construction project at Um Qasr in Iraq.

Several firms have shown interest in this project, the tender documents for which may be examined at the offices of **Coode, Binnie & Preece**, consulting engineering firm, at Ottawa.

One of the parent firms of this consulting group, **Coode & Partners** in the U. K. is the consulting engineer for this project.

Though many projects are already financed by the sponsors through various lending agencies, including the World Bank of which Canada is a member, there is at least an equal number that require the provision of financing before a contract can be secured.

Some Canadian construction firms have felt at a disadvantage because of inability to provide medium or long-term financing.

A method available to Canadian firms is through the securing of an export credit insurance policy from the Export Credits Insurance Corp., a Canadian government agency at Ottawa.

A number of Canadian firms have found no difficulty in securing loans from their banks through the security provided by an E.C.I.C. policy.

This insurance policy protects the insured from the risk of non-payment due to political and other factors. Recent changes in the legislation now allow guarantees to be made directly to lenders.

How Stocks Did

	Recent price $	1959-60 High $	1959-60 Low $	Earnings per share latest year $	Price times earnings $	Indicated Dividend $	Indicated Yield %
Building Products Ltd.	30½	39	28¾	3.29	9.3	1.80	5.90
Canada Cement Co.	31¼	37	26⅞	2.54	12.3	1.00	3.20
Canadian Dredge & Dock	14¾	22.67	14¼	1.39	10.6	1.00	6.78
Dominion Bridge Co.	19½	24½	19½	1.74	11.2	1.00	5.13
Dominion Steel & Coal	15¼	22¾	14	1.06	14.4	0.40	2.62
Dominion Tar & Chemical	14½	20	14⅛	1.40	10.4	0.60	4.14
Foundation Co.	10¾	17	10⅜	1.53	7.0	0.50	4.65
Standard Paving & Materials	18	24¾	14½	1.20	15.0	0.80	4.44
Steel Co. of Canada	81	90	68½	7.58	10.7	2.70	3.00

*Adjusted for 3-for-2 stock split.

Here's What Companies Earned

This year, some $7,500 million will be spent on construction in Canada.

That's the estimate of industry men—and it even allows for a decline in housing starts.

This total would be the highest amount ever devoted to construction in Canada.

In terms of tangibles, it means more sales of everything from structural steel to lumber, from plumbing supplies to clay products.

Higher sales should mean improved earnings for construction companies and suppliers of building materials—few of which showed any substantial improvement in their latest earnings statements.

Market action of the building companies' stocks during the past year reflected the so-so profit picture.

The DBS index of 15 building stocks' prices, at recent levels, was 4.4% lower than a year earlier and 0.2% lower than at the beginning of 1959.

The building stocks fared better—but only slightly better — than a broad list of stocks represented by the DBS investors' price index of 92 stocks.

This index was 5.2% lower than a year earlier, 3.4% lower than at Jan. 1, 1959.

Over the years, construction stocks have shown a fairly consistent defensive pattern — that is, they have usually declined less, on average, than have most stocks when the market is in a period of broad, general decline.

Stocks in the construction group, as represented by the nine widely held stocks in the accompanying table, appear to be in a good defensive position now, reasonably well insulated against any sharp market decline.

Price-earnings ratios of the nine stocks average 11.2.

The lowest price-earnings ratio is that of **Foundation Co. of Canada**; market price is seven times the company' 1958 earnings (latest reported).

At the other extreme is **Standard Paving & Materials Ltd.**, selling at 15 times its earnings for the year ended last March 31 (profit in the first half of the current year was 6.7% lower than in the corresponding 1958 period).

Besides being conservatively priced in relation to the earnings they report, the construction issues offer a return in keeping with most other seasoned groups of stocks.

For the nine stocks in the table, average yield is 4.43%.

Again on average, the group pays out to its shareholders 48.8% of latest reported yearly earnings.

Broken down by individual companies, however, pay-out varies widely—from 32.7% in the case of Foundation Co. of Canada, to 71.9% by **Canadian Dredge & Dock Co.**

Here are highlights affecting the outlook of key companies in the industry:

• **Building Products Ltd.** is constructing a plant to produce bituminized fibre pipe and conduit, which are to be offered on the Canadian market early this year.

Profit margins were cut in second-half 1959 when oversupply and keener competition forced cuts in prices of asphalt roll roofing and shingles. But full year's profit rose 18.3% to $3.29 per share, from 1958s $2.78.

• **Canada Cement Co.** expects that this year's construction volume will be high enough to permit it to operate its plants at efficient rates.

It plans to boost its own capital expenditures to $2,750,000 from 1959's $2.6 million.

• **Canadian Dredge & Dock Co.** expects to match last year's earnings ($1.39 per share, when adjusted for stock split) in the fiscal year ending April 30, but the backlog of orders at that date will probably be lower than a year earlier.

• **Dominion Bridge Co.** had 25% more orders on hand at the beginning of 1960 than it had at the start of 1959.

Last year, company booked 30% more orders than in 1958, but had to take business at lower prices to retain its share of the market.

• **Dominion Tar & Chemical Co.** expects 1960 to be a good year, but not a boom year. Chemical operations should show some increase in volume, but with stable prices.

• **Foundation Co. of Canada** is currently working on Canada's biggest commercial development, Montreal's $75 million Place Ville Marie project.

Its activities are widely diversified both by industry (e.g., marine jobs) and geographically (a subsidiary in the Dominican Republic.

• **Standard Paving & Materials Ltd.**, which recently was the object of heavy but unsuccessful bidding, earned less in the first half of its current fiscal year than it did a year earlier—97c vs. $1.04—but these results are not considered to be necessarily indicative of the trend of the full year's earnings.

• **Steel Co. of Canada** looks forward to a good year in 1960, to follow a record 1959 period which saw new highs in production, sales and profits. Orders booked already indicate good volume into the second quarter at least.

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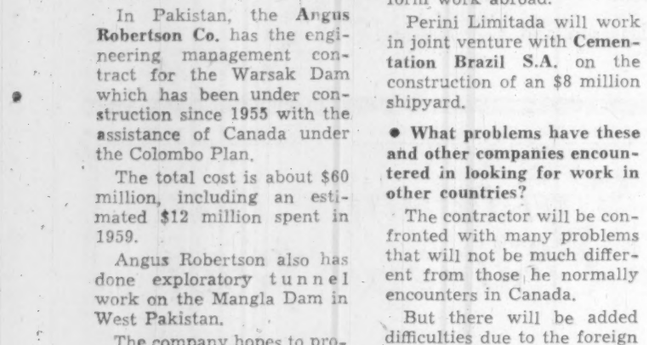
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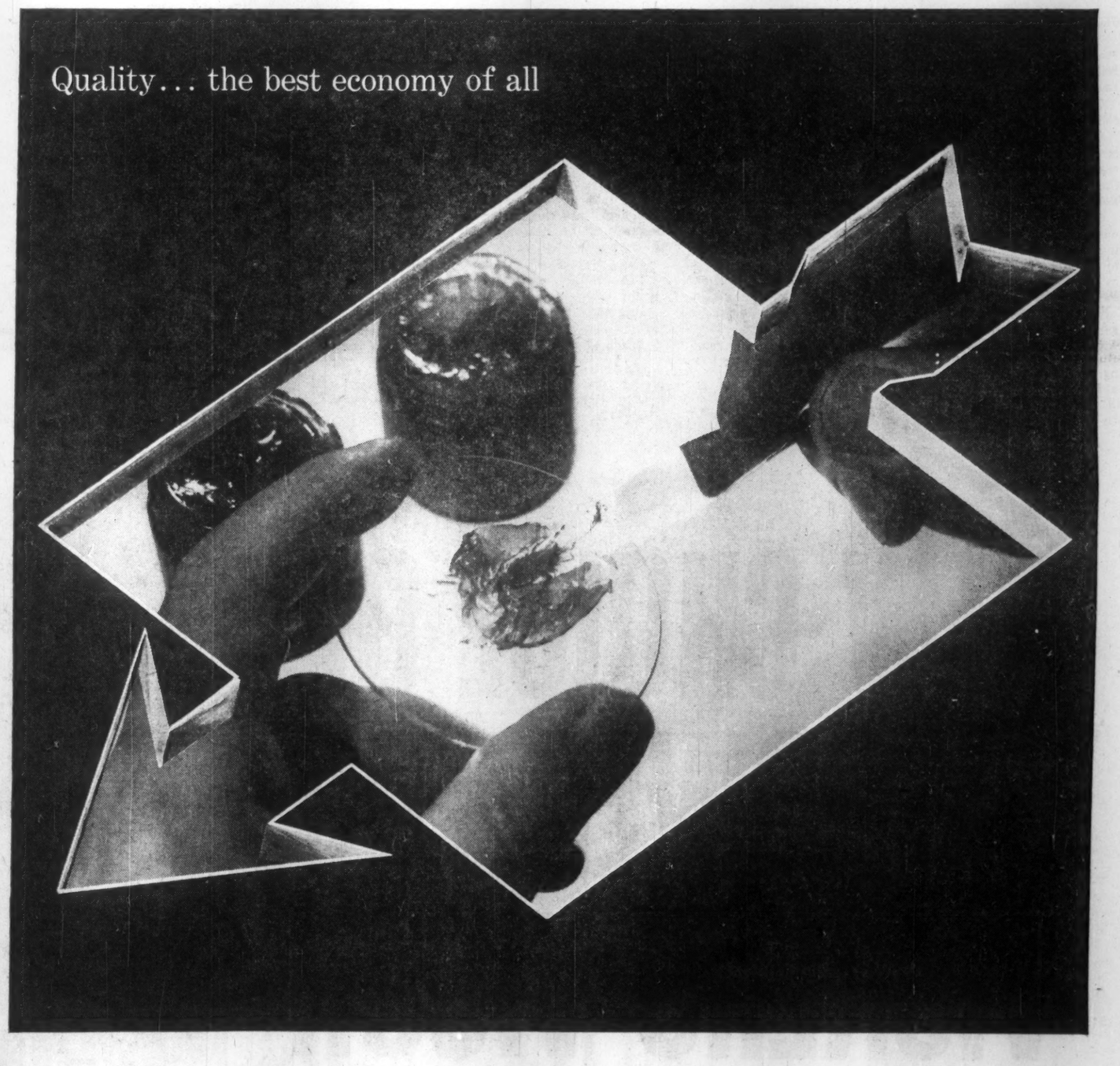
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You can't "feel" the answer. Any "multipurpose" grease you buy is a compromise. Lubrication engineers say it *can't possibly be* the best lubricant both for high speeds and low loads . . . and for low speeds and heavy loads. It's *got to be* somewhere in between, so that it can do both jobs fairly well.
What you should do is decide on *which* multipurpose grease is best for you. This is a decision for an expert team—you and "The Man from Sun Oil"—because you have to consider many variables.
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Survey Problem of Dredging Moosonee Deep-Water Harbor

A survey on an "Arctic" deep-water harbor development at Moosonee, Ont., on James Bay will start this month.

The program will determine problems involved in dredging to create a safe, deepwater harbor in which big ships could winter.

A major ocean port at Moosonee would mean millions of dollars in contracts for Canada's construction industry for years to come.

The possibilities for Moosonee as a port are almost unlimited.

Main purpose in developing the port would be as a transshipment point for eventual movement of iron ore from Great Whale and Fort George on the mainland and the Belcher Islands.

There is an estimated four billion tons of iron ore in these areas.

The ore would be carried to Moosonee and from there via rail to Ontario's industrial heartland.

Ore reaching Moosonee could eventually build up to about 10 million tons a year.

The port could also serve as a base for supplying the DEW and Mid-Canada radar systems.

A grain elevator could store Northern Ontario wheat for shipping to European ports.

Ontario Northland Railway will have to spend large sums — estimated at $20 to $30 million — for the marshalling yards at Moosonee as additional passing tracks.

For **FP**, O. T. G. Williams, executive assistant to the chairman, Ontario Northland Railway, describes the latest developments at Moosonee. Mr. Williams has had almost 30 years' experience in engineering and construction work in Canada and the U. S.

At the moment, what is known about the Moosonee situation from an engineering point of view stems largely from the survey made in 1911 by S. C. Ells of Ottawa. His chart and soundings would need little revision today.

In the winter of 1958-9, Ontario Northland Railway spent $15,000 on borings in the proposed harbor area, the main channel, the area at and beyond the outer bar and the large shoal immediately offshore from Moosonee.

Holes were drilled to a minimum of 30 ft. below low tide level. None of these, nor penetration tests to the 60 and 70 ft. levels, encountered rock.

In general, the material at and below 30 ft. is dense glacial till and this material occurs in some areas above 30 ft. In the shoal at Moosonee the drilling was carried to 20 or 25 ft. below low water with penetration tests to 60 ft.

In this general area it is expected that dredging will be carried to a depth of approximately 12 ft. over a wide area to form a freeway for ice and high water during the spring runoff.

The drilling disclosed that the shoal consists almost entirely of clean, sharp sand with about 15% of fine gravel and it is described as an almost ideal fine aggregate for concrete.

The drilling records indicate that more than 2 million cu. yd. of this material can be recovered.

As such material can not be secured in any other known location north of Cochrane, the value of the deposit is evident.

A great step forward was made when the federal and Ontario governments agreed in principle that a harbor was desirable at Moosonee.

The project has been advocated for some years by Col. Reynolds, chairman O.N.R. and more recently it has received the enthusiastic support of Premier Frost of Ontario.

Each government has appropriated $50,000 to defray the cost of a series of surveys to be made during 1960 to determine the feasibility of the project from an engineering point of view.

This work will start this month when control stations will be located and established for use in the summer when low-level photographic and hydrographic surveys will be made.

The first will result in the development of a chart, on the scale of 1 in.-200 ft., showing the whole of the estuary.

The hydrographic survey, which will include soundings over all of the significant areas, will be supplemented by tide readings and stream flow measurements throughout the season.

A report based on these surveys and present available information is to be completed by November 1, 1960.

The main consideration in designing a harbor at Moosonee is to provide a safe anchorage for shipping during the winter and the spring break-up.

This is essential to take advantage of the more than five months navigation season in James and Hudson Bays in contrast to the 10-week season through Hudson Strait.

The situation is ideal for the creation of a still-water basin which will be unaffected by either ice or high water.

Two islands, Butler and Big Duck, parallel the Moosonee shore some 400 yds. away.

It is proposed to construct an embankment on these islands and to continue it at the upper end across the channel to the mainland.

This would afford a basin 400 yds. wide and 3-mi. long.

The inner face of this embankment and the enclosed shoreline will provide ample space for docks and a fleet could winter in the harbor.

The construction of a harbor and ship channel at Moosonee appears to present no unusual problems.

In the past, ice-jams have been an annual occurrence but they have caused only infrequent and minor damage and they have never resulted in flooding the Moosonee shore.

The freeway which will be dredged between Butler and Charles Islands, and from which area the sand will be recovered, will eliminate all danger of jamming. It has been generally agreed by all competent observers that the ice conditions at Moosonee are much less serious than those at Montreal.

Most, if not all, of the dredging can be handled with suction dredges and there is ample disposal space within the estuary for the dredged material.

Concrete aggregates, both fine and coarse, are available in the immediate neighborhood.

A port at Moosonee capable of accommodating the type of shipping now using the St. Lawrence Seaway is fully justified if it does no more than make possible the development of the iron ore deposits in the Great Whale River area of Quebec.

That deposit, within 35 mi. of an excellent natural harbor, can supply 5 million tons of 70% concentrates per year for 100 yrs. at least.

Within a radius of 20 mi., are three potential hydro-electric power sites and the ore is magnetite.

That traffic alone would make Moosonee a busy port.

In the same general area are other iron deposits which might be served by an extension of the same railway and by the same harbor.

Galena, copper, zinc and nickel are also known to exist.

Another opportunity for heavy incoming traffic is in pulpwood.

All of the east coast of James Bay is densely forested. It also has the Fort George, Old Factory, East Main and Rupert Rivers discharging into the Bay.

The situation could hardly be better for logging operations but, as things are, this timber is bound to go to waste.

It could mean a large new source of income for Quebec and reasonably-priced pulpwood for a paper mill at Moosonee.

The cost of pulpwood reaching Moosonee by cheap water transportation might reasonably be expected to offset the additional rail haul to the south. The paper would also be in a highly-strategic location for export during the shipping season through Hudson Strait.

The news that a department of forestry is to be established may be interesting to speculate as to what forest products, other than pulp and paper, might be expected to move out through Moosonee.

Plywood and fibre boards of various types are now being manufactured in Northern Ontario and an export outlet at Moosonee would be bound to lead to expanding outputs.

Even so, the possibilities for Moosonee are not yet exhausted.

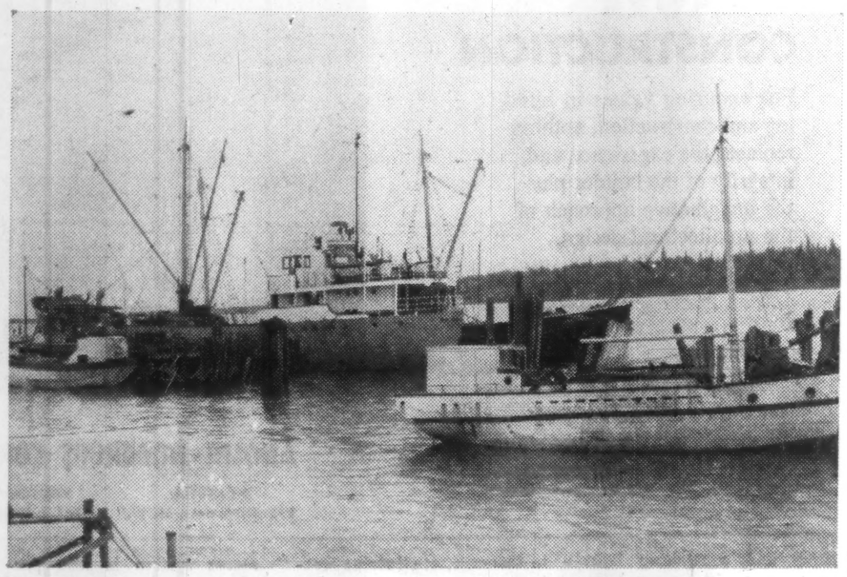
Moosonee could supplement Churchill in the export of grain. Moosonee is nearer to the grain fields of Southern Manitoba than Churchill.

What it all adds up to is the ultimate investment of millions of dollars for mining developments, dock facilities, treatment plants, industries and railway betterment and construction. Of this sum, the cost of the harbor development will be a minor item.

It is rational to foresee a city of 15,000 people at Moosonee, new towns of 2,000-3,000 at the mines and settlements where now are only **Hudson's Bay Co.** posts.

There will be expansion and a faster tempo in every community in Northern Ontario and new employment in every phase of activity in the south.

As with Cobalt, the Porcupine and Kirkland Lake, the developments at Moosonee will bring a new wave of prosperity to Canada in general.



SHIP LOADING oil is in the future still-water basin area of Moosonee's proposed harbor development.

Shingles, Shakes, Renovate

One of the simplest and most economical methods of completely renovating or remodelling an older home is to use red cedar shingles and sidewall shakes.

The method can easily be mastered by "do-it-yourself" addicts.

In re-roofing with red cedar shingles it is unnecessary to remove the old shingles. New shingles can be applied right over the old ones increasing the weather resistance of the roof and adding valuable extra insulation.

This method also prevents mess and damage to lawns and flower beds and removes the possibility of damage inside the home if storms break while the roof is being renewed.

New walls of machine-grooved red cedar shakes can be applied over any existing wall.

Brick walls are covered by furring the walls and applying spaced shingle lath or nailing strips to the furring.

Over stucco walls, nailing strips are attached with nails long enough to penetrate the underlying sheathing or studs.

If the walls are of wood, the shakes may be applied directly, just as if on new sheathing.

No special tools are required.

Further information can be obtained free by writing to the Red Cedar Shingle Bureau, 550 Burrard St., Vancouver 1.

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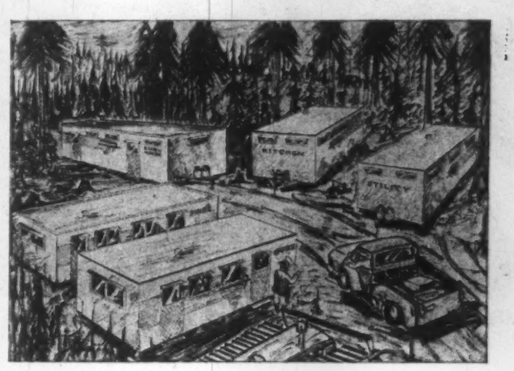

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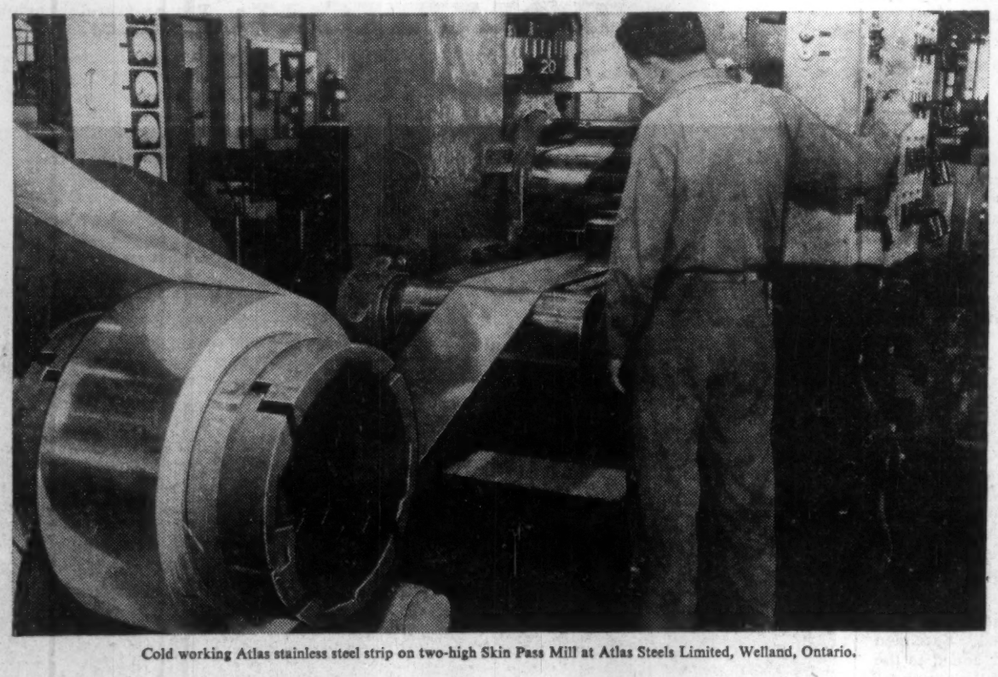
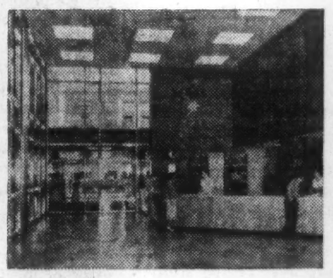


Cold working Atlas stainless steel strip on two-high Skin Pass Mill at Atlas Steels Limited, Welland, Ontario.

Atlas stainless steel is used extensively in restaurants such as this one in the Reeta Hotel, Welland, Ontario.

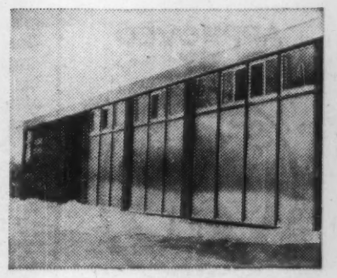


Stainless steel mullions produced from Atlas Type 304 stainless steel strip were used in a 13-storey building at 170 University Avenue, Toronto. Architects: Bregman & Hamann, Toronto. Metal Fabricator: Canadian Crittall Metal Window Ltd., Toronto.

Reception area of Assumption University Library, Windsor, features Atlas stainless steel in the entrance doors and interior partitions. Architects: Pennington & Carter, Windsor. Metal Fabricator: Macotta Company of Canada Limited, Weston.

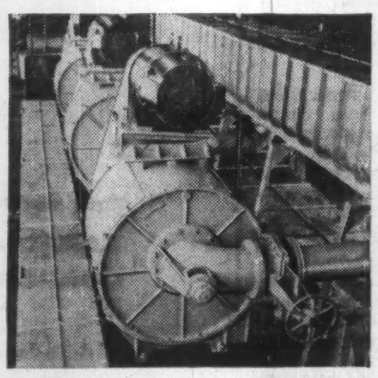
Designed to resist wear and weather, stainless steel curtain wall panels for exterior walls of St. Ann's School, Fenwick, Ontario. Demountable, they will permit easy expansion of school. Architect: David C. Stevens, London. Metal Fabricator: Macotta Company of Canada Limited, Weston.

Stainless steel was used to produce striking architectural effects in the main entrance vestibule of the Imperial Oil Building in Toronto. Architects: Mathers & Haldenby, Toronto, Ontario. Metal Fabricators: Canadian Rogers Eastern Ltd., Toronto, Ontario.

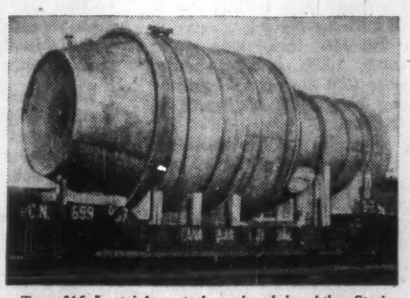


ATLAS STEELS LIMITED uses INCO NICKEL in the production of fine quality nickel bearing stainless steels for a wide range of applications

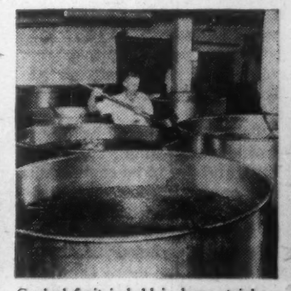
Corrosion resistance, strength, durability, heat resistance . . . and lustrous, lasting beauty. These are the things that make the nickel bearing stainless steels produced by Atlas Steels Limited so useful in so many industries—in food and chemical processing, in pulp and paper production, in architecture and where high temperatures, stress and corrosion are factors. There are undoubtedly many ways nickel stainless steel can be put to work in your business to help increase production, cut replacement time and costs or improve the quality of your products. Atlas produces a wide range of nickel bearing stainless steel products including sheet and strip for use in the manufacture of architectural components and industrial equipment, some examples of which are illustrated on the facing page. For complete information, write Atlas Steels Limited, Welland, Ontario, or Inco.



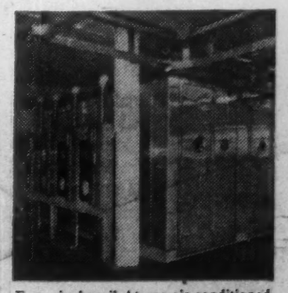
Type 304 stainless steel Cowan Screen Flumes used in pulp and paper production at a large west coast mill.



Type 316 L stainless steel produced by Atlas Steels Limited was used in this 36' x 12'6" diameter ammonium sulphate crystallizer fabricated by Canadian Locomotive Company Limited, Kingston, Ontario.



Cooked fruit is held in large stainless steel vats prior to packaging at E. D. Smith & Sons, Winona, Ontario.



Four single rail Atmos air-conditioned smokehouses at Noe Bourassa Limited, Montreal, are made entirely of Atlas stainless steel. Metal Fabricator: McGruer, Fortier, Meyers Ltd., Montreal.

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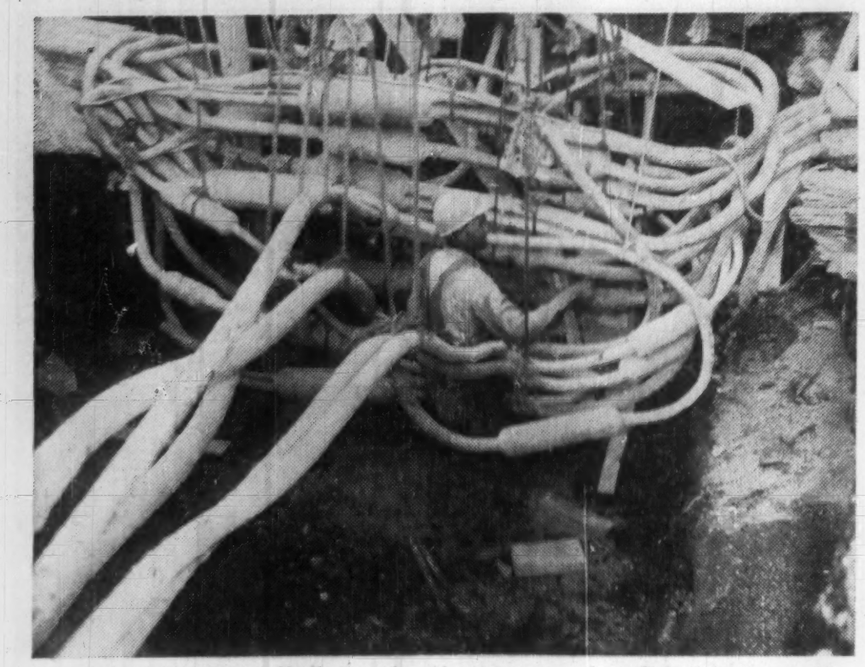

BIGGEST MANHOLE in North America gives access to these Bell Telephone cables. Company moved and added to its underground facilities along Montreal's Ontario St. in connection with a street-widening program.

Biggest Budget Ever For Bell Telephone

With the largest construction budget in its history, **Bell Telephone Co. of Canada** had record-breaking capital expenditures of $195 million last year.

The outlook for this year is for spending nearly $200 million.

This $195 million investment in 1959 was in wire, cables, equipment, land, buildings, vehicles, tools and other items needed to extend and improve the company's communication network stretching across Ontario and Quebec.

It made possible a net growth of more than 180,000 telephones operated by Bell, besides providing for future growth and improvement.

On Jan. 1 this year Bell had more than 3,320,000 telephones in service.

The task kept telephone engineers and contractors busy in the rugged sub-Arctic and remote rural areas, as well as in cities and villages in the two most populated provinces of Canada.

Construction jobs ranged from the $4,600,000 administrative centre on Toronto's Eglinton Ave. W. to small huts to house equipment along long distance routes lacing Ontario and Quebec.

Much of Bell's capital expenditures are for installation of equipment in subscribers' premises and for switching and transmission facilities, but in the period 1959-60, the company's program calls for spending $40 million for land and buildings alone.

Last year saw the completion of 66 new telephone buildings and enlargement of 30 others.

The program for 1960 calls for the erection of more than 100 new buildings and 30 extensions.

These totals do not include a number of small equipment huts, which if included, would boost the 1960 total of building projects to some 170.

In 1959, the largest single building to get under way was the Eglinton Avenue centre in Toronto.

This 10-story structure, providing more than 138,000 sq. ft. of space, when completed early in 1961, will house large sections of the company's directory department, the "Yellow Pages" headquarters, long distance switchboard rooms, "Information" and sales, records and various administrative offices.

The $3 million, seven-story extension to the long distance centre on Belmont Street, in Montreal, was completed last year. This job was started in 1958.

Projects of this type reflect the growing use of long distance service, which increased by 9% in 1959 to reach a level of nearly 400,000 long distance calls in the average day.

Another step to improve long distance service is the inauguration of Direct Distance Dialing service for Montreal and vicinity, scheduled for next month. March 6 is the set date.

This innovation, similar to the DDD service which was introduced in Toronto and Guelph in 1958, required the erection of a $1,350,000 building an Oxenden Ave. Construction started in 1958, and was completed late in 1959.

The automatic long distance switching equipment is installed, and technicians are testing it in preparation for "D-Day."

Cornwall and Valleyfield will also have DDD this spring, and preparing for these and subsequent extensions of DDD is one of the main construction activities affecting long distance service.

Another building, in the over $1 million class, started in 1958 and completed last year, is the centre on Jackson St., Hamilton, to house equipment for automatically recording details of calls for billing purposes. This, too, is related to the extension of Direct Distance Dialing service.

Two more major building projects got under way in 1959, and are to be completed this year.

One, on Montreal's Montée St. Michel is an extension to an existing building. This addition, costing more than $1 million, will house long distance equipment, special Direct Distance Dialing switchboards, "Information" and other operating units.

In London, Ont., Bell's Colborne St. building is being extended. Scheduled for completion early in 1960, this two-story-and-basement addition will house equipment for automatically making connections for long distance calls when DDD is introduced in London.

It will also house apparatus associated with the Toronto-Windsor microwave system being built to transmit telephone calls.

Some of the most important construction work being carried out by the Bell company is the burying of custom - built, long - distance cables to provide more intercity circuits.

In most projects of this type "carrier" systems are being used, so that a number of conversations can be carried along each pair of wires.

One of these projects is the construction of a cable system to connect cities and towns between Toronto and Montreal.

This $4 million task, being done by sections, began in 1958 and is to be completed in 1962.

Other similar projects scheduled to be completed in 1960, 1961 or 1962, and ranging in cost from $700,000 to $2,200,000, are the Montreal-Repentigny, Fort William-Kenora, Lake St. John, Ottawa-Pembroke and Valleyfield-Ormstown cable installations.

A $1,300,000 cable project in the Chicoutimi region which was started in 1957 was completed last year.

Scores of jobs of this type —smaller, but still in the six-figure class — were undertaken last year, but even more will be started in 1960.

In the cities, too, much underground cable construction work was carried out in 1959.

For example, in Montreal, where certain streets were rebuilt, Bell took the opportunity to replace its conduits, at a cost of some $500,000.

An operation in 1959 that attracted public interest, although a relatively small job to the telephone company, was the placing of a cable on the St. Lawrence River bed, between Quebec City and Levis.

The cable was reeled from a barge and anchored to the river bottom by large metal weights.

The circuits it provides supplement those already contained in other submarine cables.

Canada's most northerly telephone exchange was opened by Bell Telephone at Frobisher on Baffin Island in mid-November.

Its 200 telephones serve some 1,200 persons living near that airport and refueling base 1,300-mi. north of Ottawa.

Material for the construction was brought in by sea, and construction forces rushed the project to completion last fall, before the bitter winter weather set in.

The installation includes 220 poles and 16-mi. of cable.

Although nine out of 10 households in Bell's operating territory have telephones, and more than 90% of these are dial-operated, the company in 1959 converted 40 manual exchanges to dial operation.

In the previous year only 15 such changeovers took place.

In almost every case the introduction of dial service to a community involves the erection of an exchange building, as well as rearrangement of the local wire-and-cable network, installation of dial equipment in the new building, and dial telephones in customers' premises.

Thomas W. Eadie, president of the company, makes this comment in a review of 1959 activities:

"We are now equipped to furnish service as soon as our customers require it in most of the communities we serve, and we have therefore been able to devote increasing attention to projects for service improvement."

He also points out that Bell introduced Extended Area Service or added to the scope of local calling in more than 60 communities.

The most important single project was the addition of 10 outer suburban exchanges to the EAS network of Greater Montreal.

Construction expenditures during the five-year period 1955-59 totaled some $826 million, an amount greater than the estimated cost of the entire Canadian share of the St. Lawrence Seaway.

Last year's construction budget alone was nearly seven times the $29 million level reached in 1946, and there is every indication that future requirements for telephone services will necessitate further large investments in plant.

"In a country advancing with the vigor that Canada is, the years ahead are bound to bring many new communications requirements," Mr. Eadie said recently. "To fill them efficiently will certainly demand large capital investment both for expansion and the further widespread mechanization of our operations."

Central Control Of Cost

Centralized supervision of new building construction, particularly electrical and mechanical services, is an important construction cost today. The central control concept has been widely accepted because it can sharply reduce operating costs.

This important cost is one which didn't even exist a few years back.

Yet, unlike many other costs which have been accepted out of necessity, this cost has been greeted with relative complacency.

The reason is that the original investment will pay for itself many times over within a relatively short period of time.

This new control concept is making a very great impact on management which, in view of rising costs of doing business and increased competition, is keenly interested in keeping operating costs down.

Centralized control achieves this desirable goal by accomplishing tasks through use of inexpensive, fast, electrical signals which normally would require hours of leg work.

The new control concept, in fact, almost enables a building to take care of itself automatically, for it places numerous functions, some standard and others of a special nature, under the supervision of a single control centre.

Flexibility is, in fact, one of the very important features of the control panels which can, if desired, be designed especially for any type of building by an architect or consulting engineer.

Typical of the functions which can be controlled by one person with no special training is electronic air cleaner supervision, fire detection, synchronization of clock systems, building programming systems, utilities consumption records, and staff communications.

Where cleanliness of a building, for example, is controlled by an electronic air cleaner, central control panel supervision assures continuous efficient operation.

When tied in with the fire detection and alarm system, an alarm is sounded at the panel and a flashing light pinpoints the fire's exact location.

If the building is equipped with a fire-sprinkler system, it can be tied into the same panel, too.

All clocks in a building can be synchronized by means of a master clock in the panel.

From the panel, too, the maintenance supervisor can instruct his crews and receive information from them. Check-in points are provided, in this case, at strategic locations throughout the building.

Panels, too, are being used for consumption records for utilities.

They can provide a daily departmental metered record of power, steam and chilled water used and can be connected to a high speed typewriter to fill in regular accounting department forms. This typewriter also logs temperature data. A sound alarm system is also provided.

A supervisor can preset the operation of all plant functions occurring regularly, such as signals, heat, lights, air conditioning and electric clocks. The settings of all can be easily changed and kept on time by the master clock.

Interest in central control panels to do the work usually associated with manual effort originated from equipment like the **Honeywell Controls Ltd.,** Supervisory DataCenter which made it possible to supervise and regulate air conditioning systems by means of one set of controls.

Its use in all types of buildings, including hospitals, schools, hotels, office and industrial buildings, banks, shopping centres and churches gave rise to a desire for other such central control panels which could do certain types of jobs for industry more efficiently and more economically.

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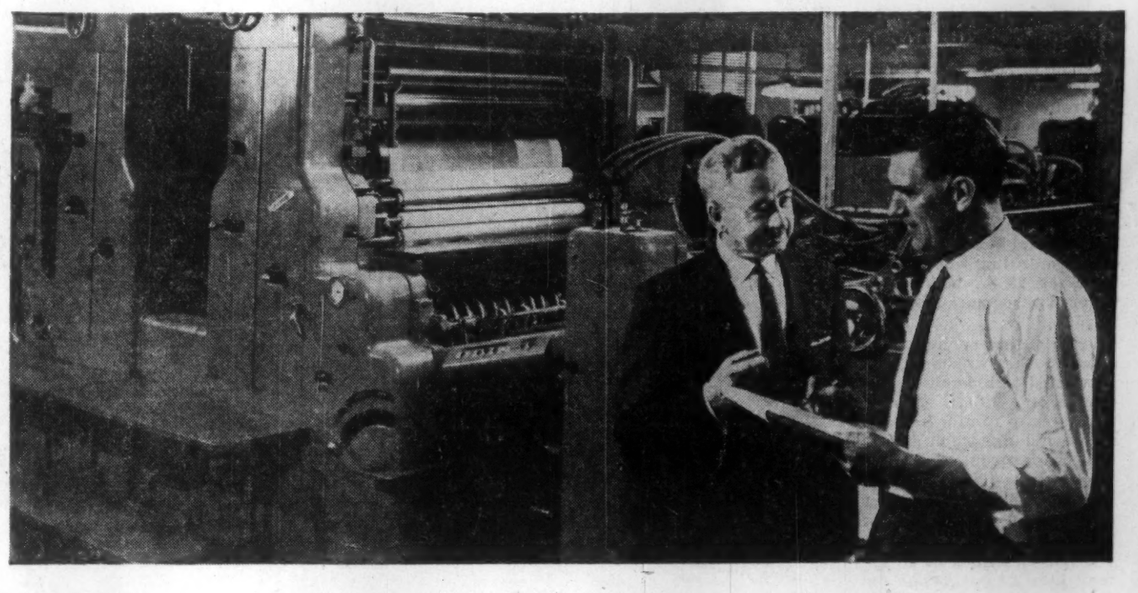

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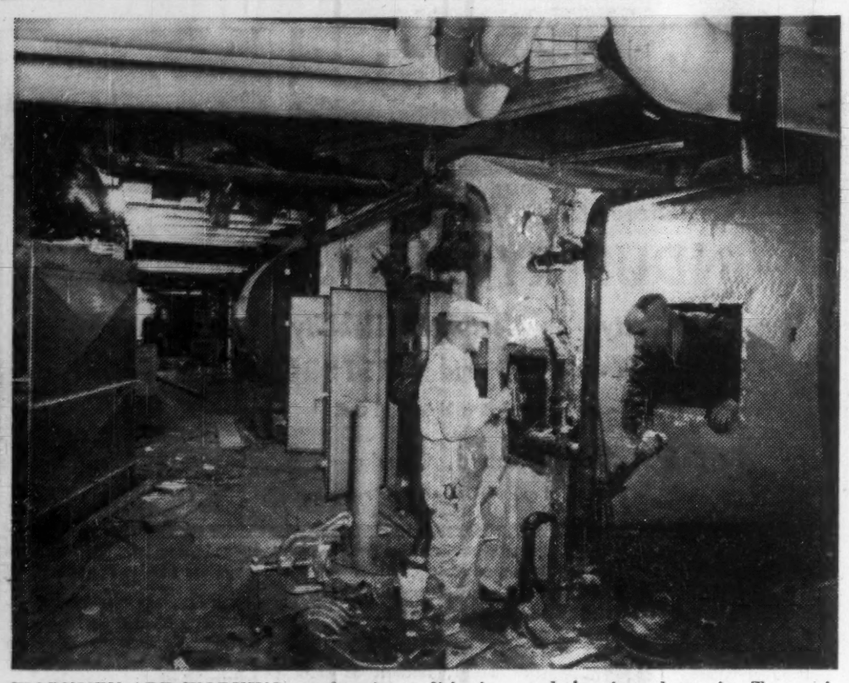

WORKMEN ARE WORKING on the air-conditioning and heating ducts in Toronto's O'Keefe Centre. The $12 million centre will be opened this fall.

New Centre

Completed This Fall

Due to open this fall, one of Toronto's most exciting building projects nears completion at the corner of Front and Yonge Sts., close to the city's waterfront.

The project:

O'Keefe Centre, multi-purpose entertainment centre to house musical comedy, revue, opera, symphony, drama and ballet.

Main auditorium will be completed by mid-spring and the centre itself finished sometime during the summer, two or three months before its opening in October.

At the moment, interior finishing is going on.

Plasterers are working on the main foyer ceiling and dressing room area and the most advanced sections of the structure while, inside the auditorium, metal laths are being installed for plastering.

Ducts for heating and air conditioning are being installed above the stage. Brick work and wall partitions are still in progress.

Building was designed by Toronto architects **Earle C. Morgan** and **Page & Steele,** in consultation with **Eggers & Higgins,** New York. **Anglin-Norcross** is general contractor.

Through emphasis on line and color, imaginative use of building materials — granite, glass and limestone — architects and engineers have given the structure a grace and lightness interpretive of its purpose.

Beyond the wide entrance the width of the building and portals, the main lobby runs opens into lounge areas which run in semi-circle around the auditorium on three levels.

The auditorium, housing a 1,000-seat balcony and a 2,200-seat raked main floor, is so designed that no patron is further than 124 ft. from the stage.

The house can be reduced to 1,087 seats by the drawing of an acoustic curtain in front of the balcony.

Stage floor is 128 ft. by 60 ft., with a 60 ft. by 30 ft. proscenium which can be reduced to 36 ft. by 18 ft.

Extensive stage receiving area, stage office and service elevator flank the stage on one side, dressing rooms and rehearsal hall on the other.

The building has been constructed to provide the most favorable acoustic conditions. Sound reinforcement systems are available wherever required.

One of the unique features of the auditorium itself is the construction of the theatre side walls consisting of sliding wood panels, remote-controlled, operating on a system of reflection and absorption which adjust to and control the quality of sound through the range of a single human voice to a full orchestra.

A mechanically - elevated orchestra pit has space for 50 musicians. When larger orchestras are required, the pit can be enlarged to accommodate an additional 40 musicians on a level behind the orchestra lift and below the stage.

The orchestra lift also can be raised to form a 12-ft. extension to the stage itself, or, at auditorium floor level, an extension of the auditorium, seating an extra 83 patrons.

For orchestral performances on stage, a specially-designed acoustic shell can be lowered into position on stage to project sound into the auditorium.

Backstage facilities provide company offices, a rehearsal hall built to stage scale, eight star dressing rooms and Green Room adjacent to the stage.

Dressing rooms for 100 chorus members are situated immediately above stage level.

Change rooms, rehearsal rooms and locker rooms for orchestra members lie below stage level.

The most modern adjustable lighting is being installed to service every type of production — drama, films, concerts, ballet, opera and television.

Stage lighting can be preset for as many as 10 scenes through automatic control.

Another unique feature of the theatre is its equipment for radio and television broadcasting. Control and announcer rooms have been located in strategic places overlooking both stage and rehearsal areas.

Aluminum And Its Many Uses

Aluminum producers have traditionally sold between 20% and 25% of their production to the construction industry.

This trend was continued in 1959 with marked increases of consumption of aluminum providing several instances of new and large-scale applications of the light metal.

Toronto's Mackenzie building, now nearing completion, displays 16 stories of aluminum.

The metal here exhibits one of its prime selling assets since a good proportion of it is anodized to a dark grey color to contrast with the natural color of the metal used in window sections.

The building is believed to display more grey anodized aluminum extrusions than any other building in the world.

Production of the grey extrusions to the close color tolerances required by the architect is a tribute to the rapidly developing finishing facilities for aluminum in Canada.

Exacting control was necessary at every stage of production, from the time the metal was extruded through to the anodizing and installation procedures.

Companies involved in this project include:

Aluminum Co. of Canada, (extruder).

Alanco Ltd. (anodizer).

Williams & Williams (metal wall fabricators).

Architects **Shore & Moffatt** of Toronto were responsible for the bold new use of color and material.

Torontonians also have witnessed in 1959 the major part of the construction of the **Sun Life Assurance Co. of Canada's** new regional headquarters on University Ave. These 16 stories of aluminum and glass curtain wall represents a new high in prestige office buildings in Canada.

The enormous columns of the building are clad with aluminum sheet which was required by the architect, **John B. Parkin Associates,** to be anodized for a perfect color blend with the extruded sections surrounding the windows.

Sheet and plate from Alumium Co. of Canada's Kingston, Ont., mill were formed, anodized and installed by **Kawneer Canada** of Don Mills, Ont.

Grey anodized aluminum found another large application in 1959 on the **T.C.A.** maintenance and overhaul centre at Dorval, outside Montreal.

Here the silicon grey of the aluminum cladding was chosen for reasons similar to those obtaining for the Mackenzie building in Toronto.

Architect and engineer, **Ross, Fish, Duchesnes, & Barrett** wanted low cost installation, the pleasing appearance of anodized grey aluminum, and the maintenance-free aspect of the anodic coating.

The low cost of installation achieved with the aluminum cladding panels can best be exemplified by the fact that part of the building was clad with single sheets of metal 58 ft. long.

Aluminum panels of this length were handled by only two men, using standard scaffolding equipment.

Anodizing of the metal used on the Dorval centre was done by a revolutionary new process marketed exclusively by the Aluminum Co.

The continuous feature of this anodizing process makes it possible to provide the long lengths used on this building.

Also featured in 1959 were plans for two gigantic new buildings in Montreal. The **C.I.L.** building and the Place Ville-Marie will include very large tonnages of aluminum, both internally and externally.

Construction of both buildings should reflect further growth of the ever-enlarging num fabrication and finishing.

In the field of residential construction, the aluminum industry welcomed to its midst several new Canadian firms in the residential siding business.

Alcan plans to go into production with a new paint line in mid-1960.

The equipment will paint coiled sheet stock for further processing into clapboard type siding by roll-forming customers.

The construction industry also offers interesting prospects for aluminum sales in the equipment used by contractors, where mobility is an important factor.

Favorable strength-weight ratio of aluminum has led to its use in an increasing number of transportation applications.

These have been limited where conditions of service were particularly severe, or other unknown factors discouraged the use of a new material.

During 1959 significant advances were made in selling aluminum truck bodies to contractors.

Striking proof of the suitability of the new aluminum alloying and joining techniques to the very latest type of contractors' bodies was shown by a gruelling test program conducted by Alcan and **Canadian Johns-Manville Ltd.** in the Jeffrey asbestos mine of the latter company.

As a result of the Johns-Manville unit, another interesting "first" occurred in recent months.

This is the supply of six heavy-duty, heated contractor's bodies to **Miron Frères Ltée.** in Montreal from **Atlas Hoist & Body Inc.,** of the same city.

These six units will be the first heated contractors' bodies to be made out of aluminum. Heating of these 15-yd. bodies is essential in Montreal's rigorous climate to ensure that the load does not become frozen to the metal body in winter.

Other indications of the acceptance of aluminum in the contracting body field:

B. K. & B. Truck Bodies of London, Ont., has sold 20 aluminum dump bodies to **Towland Co.**

Sicard Inc., has ordered 14 bodies of 9-cu.-yd. capacity to be made in aluminum for a contractor in Ottawa.

Brantford Coach & Body Ltd., is planning to make three aluminum dump bodies for another contractor.

King Paving Co. has also placed an order.

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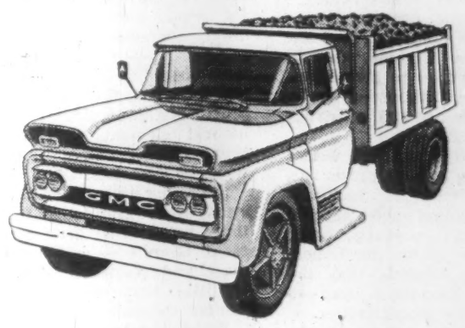

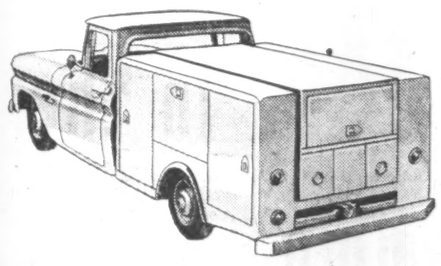

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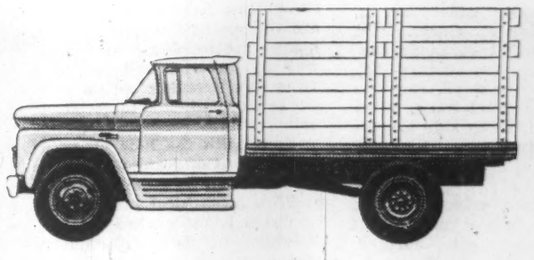

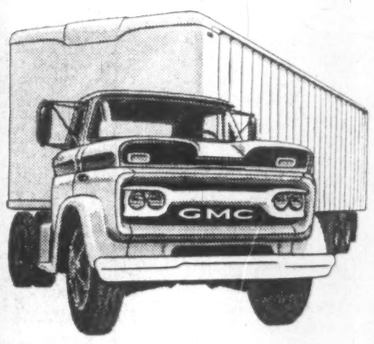

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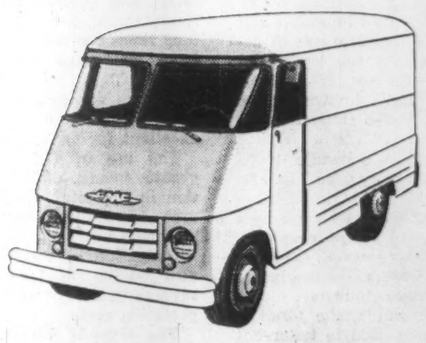

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Porcelain

Outstanding New Find

For thousands of years, man's main building materials have been wood, brick and stone. More recently, steel and aluminum have come into general use. Other new materials are now coming up fast.

Outstanding among these new materials is architectural porcelain—sheet steel finished in colorful ceramics.

Porcelain enamel has been used for centuries on such items as pots and pans and other household goods, and for decades on bathtubs, stoves, etc.

Since World War II, however, this old material has been taking a new lease on life.

New techniques, new equipment, new formulations, have produced strong, tough finishes, in an infinite variety of colors, stipples, mottles, etc.

These ceramic coatings, fused to steel, are completely permanent-color-fast, hard as glass, unaffected by acids or caustics, requiring no maintenance.

They are now being used for a wide variety of industrial products — jet engine parts, missile components, auto and truck mufflers, gas furnace heat exchangers, to name only a few.

Their most spectacular application and fastest growth have been in the field of architectural porcelain, used in all types of buildings.

Colorful ceramic-coated industrial siding has recently made its appearance, for use wherever a building's skin may be subjected to high temperature, corrosion or abrasion.

It is competitively priced with other materials previously used for such applications.

As industrial complexes grow, and atmosphere pollution increases, corrosion is becoming a general problem with all buildings, and protective coatings like ceramics become increasingly necessary.

Architectural porcelain panels, in very many shapes and finishes, are now widely used for store-fronts, and for renovating old buildings. Nearly all gasoline service stations are now covered, at least in part, with porcelain.

Starting in 1960, complete porcelain service stations, all pre-fabricated, will appear on our roadsides and street corners.

Large office buildings, such as the **B. C. Electric** building in Vancouver, have porcelain curtain walls—insulated panels, only an inch or two thick, and weighing less than 10 lb. per sq. ft., versus 100 lb. for old-style, thick masonry walls.

The whole weight of the building is greatly reduced, and large economies are made in the cost of foundations and structural steel.

The finished building is eye-catching, with its colorful exterior, and requires no maintenance. Rain keeps it clean, so it presents an ever-fresh appearance.

Packaged service stations, mass-produced and using modular porcelain panels, are now available through Cerametal and **Disher-Soules Construction Co.,** which does the actual erecting.

The two companies offer Canadian oil companies what amounts to a "turn-key" service to save them time, money and headaches by providing "one-point" responsibility.

Between them, the two companies break ground, erect the steel, supply the building materials and build the stations.

Key is a modular porcelain panel, 2½ ft. by 4 ft. and 1 in. thick which can be produced on an assembly line basis.

Trained erection crews can put up a complete package station in a few days. There are no time-consuming alterations on the job and less supervision is needed.

The type of construction — porcelain panels hung on a steel structura framework — is said to reduce weight but keep rigidity and foundations can be built for a lighter load.

Stations are fully insulated. Porcelain inner walls can be wiped down easily, won't be marked by acids, oils, solvents, or other substances.

Provision is made for service equipment with structural members designed into the building to support tire racks and other equipment.

Widespread applications for similar prefab structures for industrial and other light construction are seen in the future.

Another porcelain product used in construction is porcelain-on-steel chalkboard, which is rapidly replacing the conventional slate blackboards.

A new product planned for 1960 production, is porcelain electric heating panels, to be available at low cost in many forms — as separate panels, as baseboard strips, as warm walls or ceilings, and in practically any color.

Manufacture of these products in Canada has given rise to a good-sized industry.

A major producer is **General Steel Wares Ltd.,** Toronto, and **Cerametal Industries Ltd.,** Streetsville, Ont., claims to be the largest firm specializing in this particular field. This company is associated by license agreement with the **Bettinger Corp.,** Milford, Mass., which has pioneered many developments.

Cerametal's president, J. H. Kent Lyons, sees a bright future for architectural porcelain products. He says:

"We introduced architectural porcelain in Canada only six years ago. Since then, its growth has been spectacular, and it is now widely accepted. Canadian sales in 1959 were about $5 million and we believe this figure will at least triple during the next five years.

"Our employment here has nearly doubled in the past year, and will probably increase at least 50% again in 1960.

"The longer we work with these materials, the more ways we find to use them.

"Today, we can make almost any shape, and we can provide finishes to match granite, marble, and other natural finishes.

"We believe our products are rapidly changing the face of Canada, and that they will change it even faster during this decade."

Mr. Lyons is building a house near Oakville, Ont., which incorporates many of these products, and will be a showcase for them.

Jet Flame Carves on Stone Big Boost to the Industry

Here's something new:

A jet flame that carves stone.

It works on the same principle as a rocket jet that generates the tremendous energy needed to power modern missiles and rockets.

Small rocket-jets of flame similar to larger afterburner flames of jet planes can now be used to carve and shape stone five times faster than mechanical methods.

Known as "stone-shaping," this unique process, available from **Linde Co.,** Division of **Union Carbide Canada Ltd.,** promises to give a terrific boost to the stone-working, building, and construction industries.

Up until now, stone workers have had to carve and shape monuments, architectural building materials and other stone products, using the same slow, mechanical chipping methods that the ancient Egyptians used to carve their hieroglyphics.

The new process works fastest on the harder stones, such as granite, quartzite, syenite, sandstone, and taconite, which conventional mechanical methods find extremely tough.

Stone is more durable than most wrought materials but costs and difficulties in shaping have prevented stone from finding wider use in present-day structures.

But now that Linde has harnessed the rocket jet flame into a small, easy-to-handle, manual torch, stone workers will be able to perform stonework formerly considered impossible or uneconomical.

The new process can be used to shape mausoleum roofs, monuments, curbing, gutter mouths, building coping, compound angled drainage slabs, or any other spallable rock structure.

The jet flame represents one of the highest concentrations of energy available to man. At its highest velocity, the small stone-shaping flame has a mechanical energy equivalent of more than 25 hp, yet this energy is contained in a slim flame only 4-in. long.

Traveling six times faster than the speed of sound and reaching temperatures of 5,550 deg. F., the rocket-jet flame spits out of a small manual torch known as the Oxweld FSJ-6 stone-shaping torch.

The easy-to-handle torch weighs slightly over 7 lb. and is only 37 in. long.

In addition to its use as a quarry and sculpturing tool, the new process is expected to find widespread use in the construction industry.

For example, the torch is now being used to tailor-cut large granite sections as part of a remodeling job on the huge two-decker Queensborough Bridge in New York City.

This job is part of a project to widen the lower level of the bridge from five to seven lanes.

This same type of work can also be done on highway and railroad bridges and tunnels.

Another model of the Oxweld FSJ-6 can be used for producing shallow blast holes for the removal of rock on highway construction jobs and in mining.

Construction men can be expected to find many other uses for this revolutionary new tool.

The new stone-shaping process also makes available to architects and builders a beautiful and vibrant new facing material.

Granite is studded with minerals like feldspar, quartz, mica and biotite, ranging in hues from clear crystal through pink, red, grey, black and white.

Passing the rocket-jet flame over granite causes controlled spalling of the granite surface splitting feldspar and quartz crystals along natural cleavage lines.

Because of the crystalline nature of granite, surfaces produced by this method are not glassy smooth. Instead, the process produces a pattern of interesting highlights, shadows, and smooth reflectant areas, creating an unusual, ever-changing visual effect.

Besides being decorative and dramatic, the surface is practically impervious to all natural elements and will stay cleaner than most wrought materials.

The crush-resistant strength of granite is four times as great as good concrete. Granite is as hard as glass and possesses surface qualities that are actually similar to glass.

Beside its ability to impart a beautiful finish on granite, the process has far-reaching economic aspects, Linde claims.

Because of its attractiveness, exceptional physical properties, and availability, granite was for many centuries the popular choice for structures ranging from Cleopatra's Needle to modern shopping centres in many metropolitan areas. But as material and labor costs rose, granite's popularity as a construction material fell.

Now, with the new process, the cost of granite facing material can be cut sharply.

With mechanical processes the slab being worked must be thick enough to withstand the stress and shock of pneumatically powered tools.

However, flame does not exert a "bearing down" force on stone, so it is possible to use stone-shaping torches to shape and texture slabs as thin as ⅝ in.

When a 3-4-in.-thick slab is wire-sawn into thinner pieces, very dull, rough surfaces are produced by the sawing.

Saw marks can be erased easily and quickly with the Linde torch, giving three or four times the useful surface from the same weight of stone.

Surface appearance is superb, and this thin stone is excellent for veneer work.

The use of 75% thinner granite means a 75% reduction in the total weight and area of granite needed to surface a building.

Reduction of total weight also results in tremendous savings in freight and transportation costs.

The Oxweld FSJ-6 torch burns oxygen and kerosene in an internal, water-cooled, rocket chamber.

The resulting flame is emitted from a convergent-divergent nozzle at a velocity of 7,000 ft. per sec. and a temperature of 5,550 deg. F. This combination of intense heat and high velocity causes stone to spall.

Cooling water for the combustion chamber exits through the front end of the burner and serves a two-fold purpose:

By positioning the water stream on one side of the spalling path, the stone on that side is protected from the flame and will not spall.

The water stream prevents the stone from overheating eliminating the possibility of thermal cracking. The size of the jet flame is controlled by a fuel control valve on the front end of the torch.

A reduction in the fuel ratio produces a smaller and sharper jet flame for more precise stone removal.

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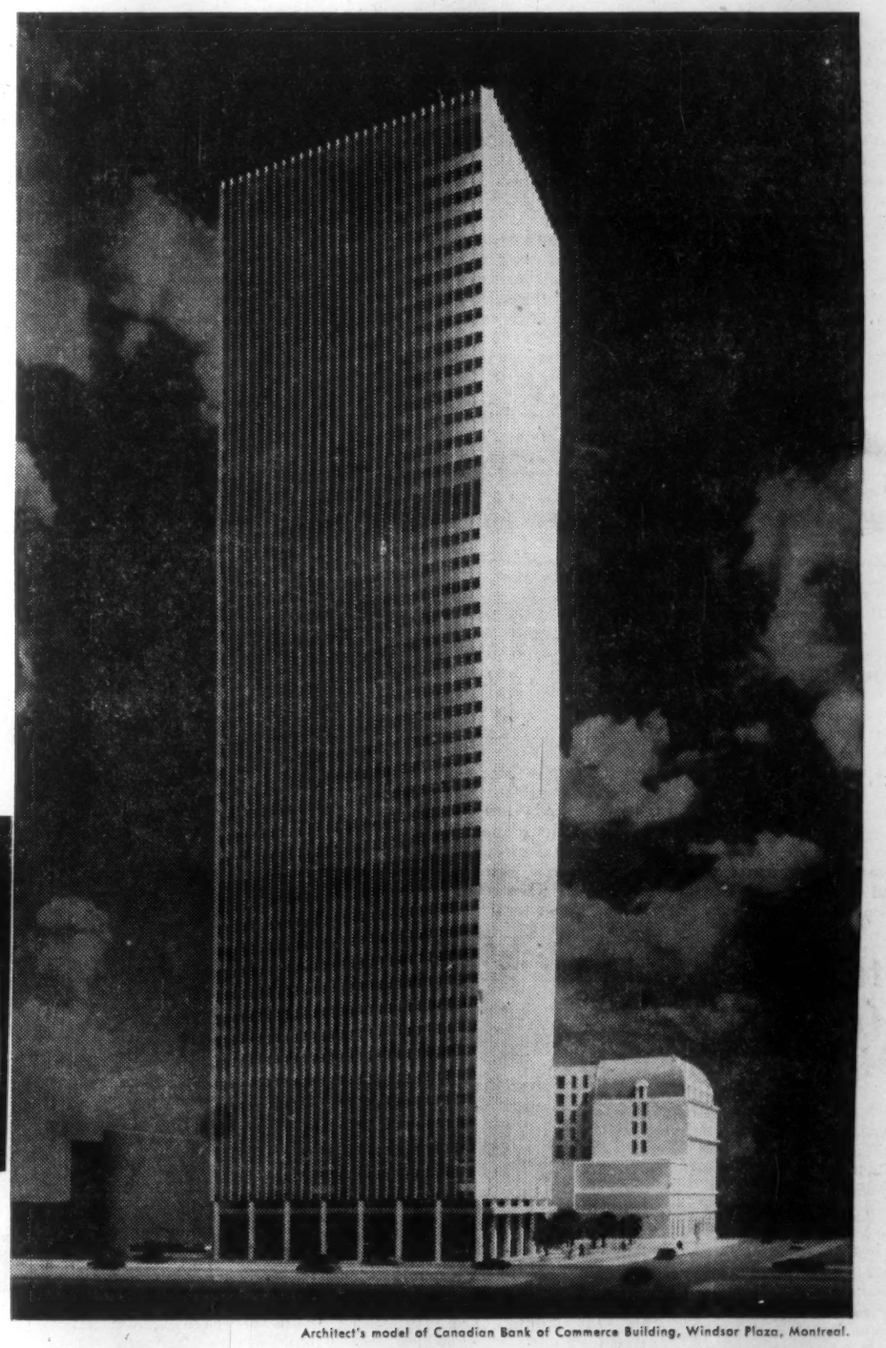
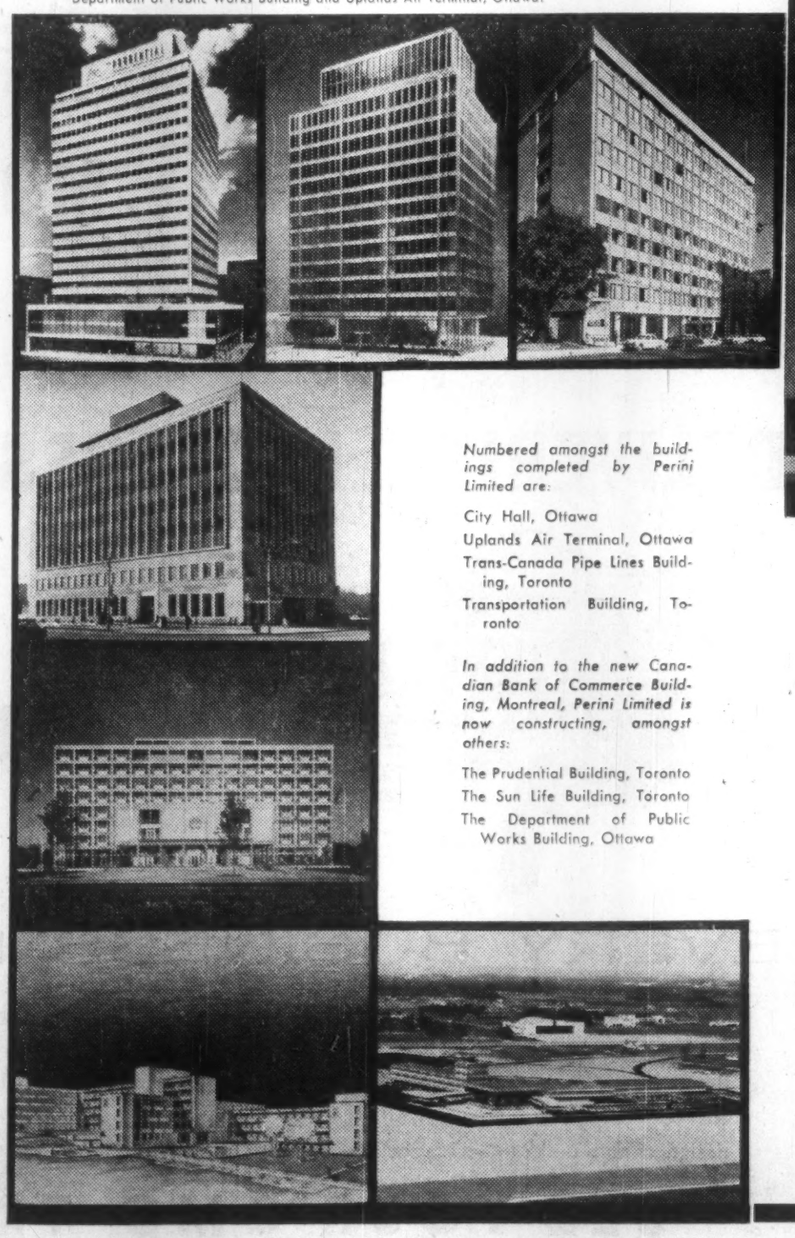


Architect's model of Canadian Bank of Commerce Building, Windsor Plaza, Montreal.

The Prudential Building, The Sun Life Building and Trans-Canada Pipe Lines Building, Toronto.
Transportation Building, Toronto.
City Hall, Ottawa.
Department of Public Works Building and Uplands Air Terminal, Ottawa.



Numbered amongst the buildings completed by Perini Limited are:

City Hall, Ottawa
Uplands Air Terminal, Ottawa
Trans-Canada Pipe Lines Building, Toronto
Transportation Building, Toronto

In addition to the new Canadian Bank of Commerce Building, Montreal, Perini Limited is now constructing, amongst others:

The Prudential Building, Toronto
The Sun Life Building, Toronto
The Department of Public Works Building, Ottawa

IN May 1961 a distinguished new skyscraper, the Canadian Bank of Commerce Building, will soar 42 storeys above Windsor Plaza, Montreal. To be the tallest in the Commonwealth, the new building will have a total height, from grade to roof, of 569 feet. It will provide 800,000 square feet of floor space for a main banking area, spacious offices and underground vaults and a parking garage.

The building will be fully air-conditioned and served by 15 high-speed automatic elevators. Stainless steel fins with green slate spandrels will be distinguishing features of its exterior design. Its site — on the west side of Dominion Square in the heart of the city — will be enhanced by a landscaped plaza leading to the new Windsor Hotel.

The sponsor of this new building is Dorchester Commerce Realty Limited. The architect is Peter Dickinson Associates and the consulting engineers are M. S. Yolles Associates and Granek, Chisvin & Associates. Perini Limited is proud to be associated with them as general contractor responsible for all phases of the building's construction.

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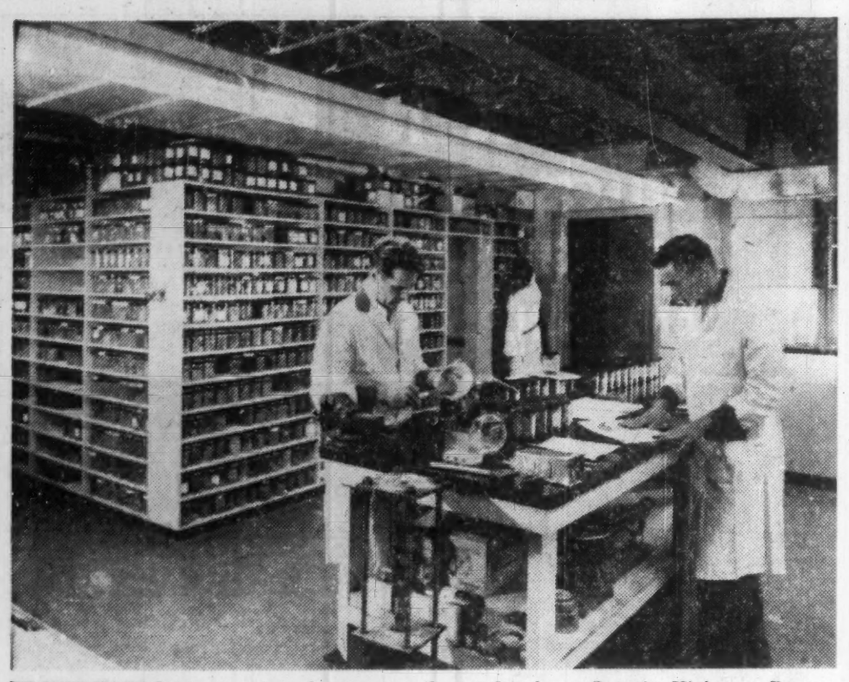


TECHNICIANS begin a series of tests on soil samples from Ontario Highways Department's Homer bridge to measure strength and compressibility of soil under a projected location of bridge footings.

Public Works Spending From Coast to Coast

Almost $200 million is being spent this fiscal year on new construction and maintenance of buildings by the Federal Department of Public Works—one of Canada's biggest construction spenders.

Important new projects include the $13 million St. John's harbor face-lift and the $7 million new terminal at the Lakehead.

The indications are that work actually started in the current year, measured in dollar terms, will be higher in harbors and rivers construction and in new highway construction. The increase will be around 10%.

But these increases may be slightly more than offset by decreases in other DPW areas, particularly in building construction.

Total estimates of the department for 1959-1960 were $236,610,789.

This, of course, is not all money that will be, or has been, spent on construction. Some is required for such items as administration, maintenance of buildings and purchasing of supplies and equipment for the government generally.

Neither do the total estimates represent all of the work done by the department. Substantial sums of money from the estimates of other departments are spent by Public Works every year on construction activities.

In 1958-59, work done with the funds of other departments amounted to $33.9 million, and in 1959-60 it is expected to exceed that figure by more than 20%.

This is a trend that has been increasing in federal public works activities in recent years; **that is a trend toward more centralization of these activities as a whole.**

In 1953-54 for example, work done with funds from other departments was only $11.9 million for the year.

In 1959-60 Public Works took on the responsibility for the design and construction of Canadian embassies and chanceries abroad. Previously this work was done by the Department of External Affairs.

Expenditures on the construction of public buildings in 1958-59 were $60.2 million.

Although the figure for the present fiscal year is expected to be somewhat less than this, the activity, as shown by figures at the end of the calendar year, was still considerable. At Dec. 31, the Department had 233 building construction projects under way with contract value of approximately $110 million.

The amount of money spent will be determined by the proportion of the work represented by this $110 million which is actually set in place by March 31, 1960.

These figures include work being carried out with departmental funds as well as work using the funds of other departments.

They include:

- Indian schools and residences for the Department of Citizenship and Immigration.
- Detachment quarters and other buildings for the RCMP.
- Buildings for the Department of Agriculture.
- Hospitals for the Department of Veterans Affairs.
- Nursing stations for the Department of National Health and Welfare.
- Schools and hospitals for Indians and Eskimos on behalf of the Department of Northern Affairs and National Resources.
- Post offices and general office buildings.

Although rich in history, the harbor badly needed modernization.

This need is indicated in cargo-handling costs in St. John's which are roughly twice as high as costs elsewhere. Among the reasons for this was lack of modern mechanical equipment for handling cargo, and the need to transport cargo by truck through the congested part of the city to the railway terminal.

The modernization begun by Public Works in 1959 will transform the harbor.

Large new wharves and transit sheds will be built. Berthing facilities for large ships to unload directly on to the railway terminal will be constructed.

The rebuilding of access roads to the waterfront is also included.

The new harbor terminal at the Lakehead is on a site on the boundary between Port Arthur and Fort William.

Three berths are being built in the immediate development but there is room on the site for future expansion to at least ten berths.

The plan assumes that most of the shipping tonnage in future will still be handled by lake freighters but one of the three new berths is specifically designed for deep-sea shipping.

Railway transfer yards, access roads, customs enclosures, provision for carpentry and repair ships, administration offices, etc. are also part of the plan.

The department has a direct responsibility for keeping clear for navigation, the main commercial shipping channels in the navigable waters of Canada.

The management of public buildings is also an important part of the department's operations.

It involves responsibility for the management of more than 3,000 buildings all over the country, which includes both Crown-owned and rented accommodation.

As another part of the trend toward centralizing the federal government's functions in construction and property management, the Department completed during the year a land registry index of all government-owned land.

The department is also the main agency for the government in the construction of highways, bridges and other highway structures.

This involves the administration of Trans-Canada Highway agreements with the provinces, the construction of highways and roads in the national parks in the Yukon and the N.W.T. and the building of bridges in which the federal government is involved such as international bridges or interprovincial bridges.

The engineering study of the proposal to build a causeway across the Northumberland Strait, linking Prince Edward Island and New Brunswick, is being carried on under this general responsibility.

On the Trans-Canada Highway, projects carried out by the participating provinces to a total of $80 million were approved for federal participation during the year.

About $53 million was paid out to the provinces in the calendar year 1959, grading was completed on 564 miles, paving on 269 miles and 70 structures of various types were built.

Direct expenditures on the Trans-Canada Highway through the national parks during the year are estimated at $12 million while expenditures on other highways in the National Parks amounted to $10 million.

In the N.W.T. approximately $4 million worth of work was carried out while in the Yukon, highways expenditures were $3.2 million.

Two major bridge prospects are under way: The vertical lift bridge across the Burlington Canal at the entrance to Hamilton Harbor (one of the largest of its kind in the world) and the bridge across the arm of the Bay of Chaleur from Campbellton, N.B. to Cross Point, Que.

This latter bridge is unusual in that it has an 800 ft. clear span in the centre to permit the passage of log booms on the Restigouche.

Unique Bridge For B.C.

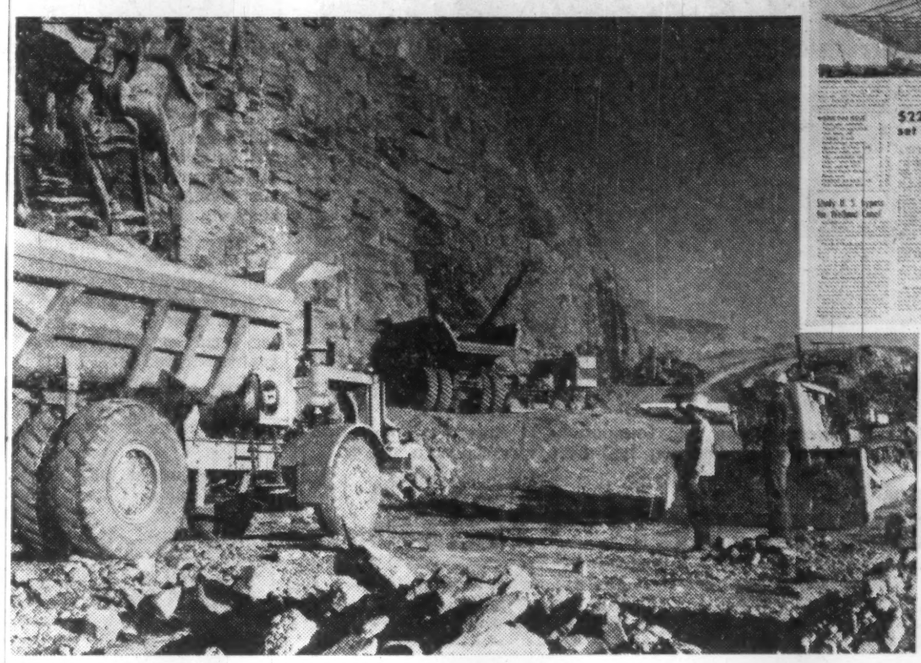
A unique structure — the Port Mann bridge in British Columbia — with at least two major innovations to this continent, will carry the Trans-Canada Highway across the Fraser river some 15 mi. east of Vancouver.

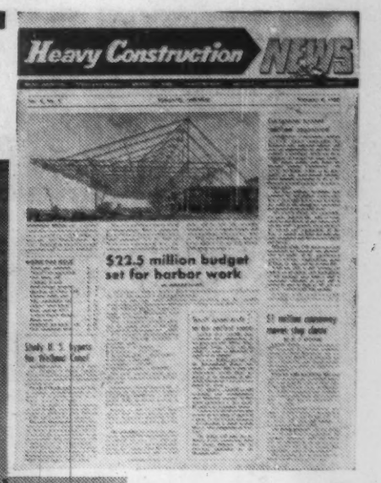
The four-lane bridge will be 6,900 ft. long with a centre span of 1,200 ft., side spans of 360 ft. and a vertical clearance of 145 ft. above high water. The estimated total cost is $25 million.

The unique aspects of the bridge:

- It has a high-level stiffened tied arch.
- Uses for the first time on this continent an "orthotropic" steel plate deck construction only one half inch thick.
- Has approach span decks prestressed by jacking up the steel girders and then lowering them to their original position after the deck has been poured and has hardened.

The biggest savings over conventional methods, however, can be attributed to the orthotropic plate deck. This deck of one-half-inch steel plate, together with stiffeners every 12 in. and cross girders forms an integral structure resulting in considerable weight reduction of the span.





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- Work on construction of jet age runways for the new International Airport at Edmonton, Alberta.
- Work on construction of a new 500-ton kraft pulp mill near Trail, B.C.

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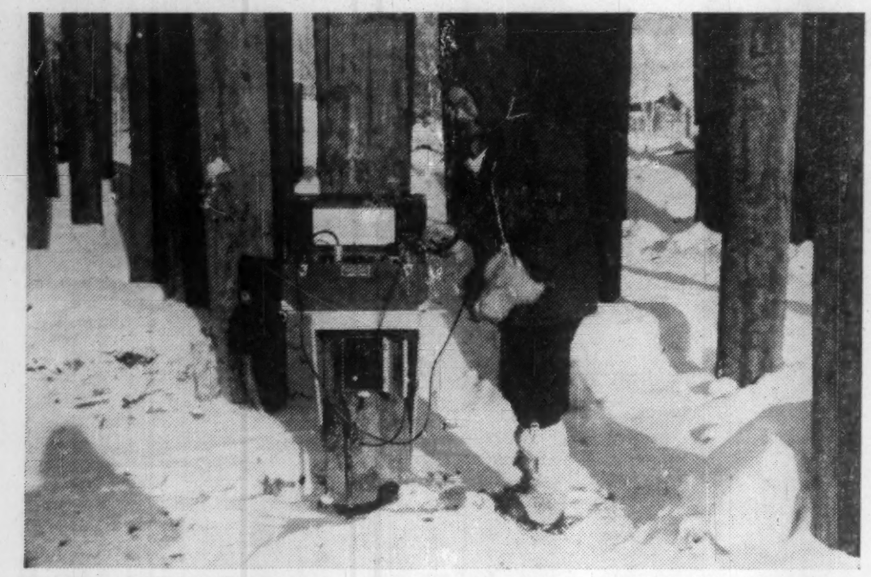

READING TEMPERATURE measurements on pile foundations at Inuvik to investigate the refreezing of permafrost around piles that had been steamed into place.

NRC Research Helps Builders, Engineers

By ROBERT F. LEGGETT

Building research in Canada durin„ 1959 continued its dual service to the construction industry by work in the laboratory and in the field.

For the first time since the National Research Council's division of building research was established in 1947, problems of its own accommodation and the construction of its own buildings did not necessarily divert any time of the senior staff.

With its total staff now just exceeding 200 the division was able to put to full use its regional laboratory facilities in Saskatoon and Halifax, and the extensive laboratories in Ottawa now provided in the building research centre.

An increasing number of visitors came to discuss building problems with individual members of the staff.

Such visits are welcomed and especially so when, as was the case in 1959 to an increasing degree, visitors came to discuss what they foresaw to be potential problems before their building operations had started.

The division is all too often in the invidious position of having to point out how actual troubles could have been avoided if potential problems had been recognized at the design stage.

In all such work, the division is fulfilling its main function, that of providing the best possible research information to architects, engineers, contractors, builders and manufacturers.

Field investigations were carried out literally from coast to coast, and from southern Ontario to far to the north of the Arctic Circle.

The eight outdoor exposure sites operated by the division for long-term durability studies of new materials and new protective coatings have similar country-wide coverage from Esquimalt on the Pacific to Halifax on the Atlantic, from Ottawa and Montreal in the south to Norman Wells in the far North.

In Victoria, a troublesome detailed problem with the exterior finish of a large existing building led to what may properly be called a piece of "building detective work" before the cause was found.

When published, the explanation of this annoying little failure may help designers to avoid its repetition.

In Newfoundland, a second survey was made of the performance of masonry and of reinforced concrete buildings in locations fully exposed to all the severity of the weather that features the east coast.

In St. John's, in Halifax, and in Ottawa it was possible to arrange for careful inspection by research officers of masonry construction in progress on large buildings.

Performance studies in future years will benefit by the accurate information of all construction details thus obtained, information that quite naturally is not usually obtainable once a building is in use.

Soil mechanics workers in DBR, have installed extensive instrumentation in the local sensitive marine clay at two points in the Ottawa area, immediately beneath the locations of two large highway approach fills, before any fill was placed.

Observations are now being taken regularly, and will be continued until long after the bridges are in service, in an attempt to correlate existing theories of soil pressure with the actual pressures caused by the two fills.

Even more extensive is the instrumentation installed in a new sub-division of Winnipeg, with permission and active support of the city engineer and his staff, as a further development of the extensive studies being made of the troubles encountered in Winnipeg with watermains due to peculiarities of local soil conditions.

Settlement gauges and thermocouples were installed by DBR staff member during the summer as the new mains were installed.

These are now being regularly observed so that, in conjunction with the results of laboratory tests upon samples of the soil in which the pipes were laid, study and analysis may be made of the slight movements that are known to occur in backfilled trenches, with a view to assisting in the solution of this municipal engineering problem.

City engineers in all parts of Canada have been troubled in the last year or two with a new problem, that of scaling of the surfaces of concrete pavements.

Field studies of this matter have been made in a number of cities and assistance rendered regarding the care that must be exercised in ensuring that all concrete used for pavements is of the best possible quality, with entrained air evenly distributed within the finished material.

This recent "rash" of surface scaling is almost certainly closely linked with the phenomenal increase in the amount of chemicals used on city streets for de-icing, as an assistance to motoring in the last year or two.

It is quite different from the more serious deterioration of concrete that has been experienced to a limited extent in the Kingston, Ont., district.

The trouble there has been related to the interaction of some of the local limestone aggregate with high alkali cement.

Low alkali cement is now locally available and its use appears to have provided a satisfactory practical solution.

The basic character of this alkali-aggregate reaction, however, has still to be determined despite the study that has been devoted to it not only by the division in Ottawa but by other leading cement research laboratories elsewhere on this continent.

The division's own studies of the problem continued throughout the year, the most modern techniques of mineralogy and physical chemistry being used, demonstrating once again that even the most practical of job problems can call into play the most basic tools of fundamental research.

Toward the end of the year one line of chemical investigation was yielding promising results.

It is hoped that an adequate understanding of the mechanism involved will be obtained in the months immediately ahead, and that with this knowledge better ways of dealing with the problem can be devised.

Its northern research station at Norman Wells, N.W.T., was again fully utilized during the summer months, a start being made in the area around the station upon some basic studies of the heat exchange at the ground surface.

By means of such investigations, involving muskeg and other types of surface covering, a better understanding of the phenomenon of permafrost should be obtained.

The practical effects of permafrost upon construction continued to be studied at the new town of Inuvik, now rapidly approaching completion, when it will take the place of the old Aklavik as the main centre of the far north-west.

The best use possible with the staff available is being made of the opportunities thus presented for investigating the effect of so much new construction upon perennially frozen soil.

Experience thus gained will be recorded and published for the guidance of all who are concerned with construction activities in the "opening-up" of the Canadian North.

Permafrost is found not only in the extreme north but as far south as the northern parts of Saskatchewan, Manitoba and Ontario.

Work proceeds on the determination of this southern boundary, so important in connection with the northern development of the provinces named.

Assistance continued at a major construction job in northern Manitoba, now known to be located well to the north of the permafrost boundary.

Installation of extensive instrumentation at the earth dykes of the Kelsey power project of the Manitoba Hydro-Electric Power Commission was completed.

This will enable the effect of the rise in river level upon the surrounding permafrost to be measured (for the first time in North America, it is believed) when the plant goes into operation.

The Division is continuing the program of basic research into the properties of snow and ice as materials, knowledge of which is essential for the solution of many practical problems.

A part of this program has been an investigation into the bearing capacity of floating sheets of ice, the significance of which is made clear every winter by the usual succession of tragic accidents.

Several pulp and paper companies are now co-operating with DBR, during winter woods operating seasons, by providing invaluable information about actual break-throughs that their crews experience.

By this combination of theoretical, laboratory, and field studies, real progress is being made toward a solution of this problem, even though the complete elimination of all accidents will always be ultimately dependent upon the human element.

Field research into the prediction of avalanches, and into their location and character, in the Glacier district, in connection with the construction of the Trans-Canada Highway through Rogers Pass, has been completed.

The results are being utilized by the Department of Public Works in the design and construction of this most scenic stretch of road.

The division will continue its interest and its observations until construction is complete and thereafter as the highway is operated by the national parks service of the Department of Northern Affairs and National Resources.

The heavy snowfall in eastern Canada during the winter of 1958-59 provided ample opportunities for field studies of snow.

Unfortunately, these had to include the study of roof collapses under heavy snow loads, quite the most tragic of which was the collapse of the roof of the Listowel, Ont., arena, with its lamentable death toll.

The division assisted the Ontario Attorney General's staff in the investigation of this tragedy, acting in this case (as always when wood is involved) in close co-operation with the forest products laboratories of Canada.

An account of the collapse will shortly be published as one constructive result of the tragedy, so that it may serve as a warning, in the hope of obviating other similar accidents.

During the year, however, the division has again encountered what used to be the "traditional" attitude to failures, a complete blackout on information for public benefit. It is to be hoped that this attitude will gradually disappear.

One way in which the lessons to be learned from failures can be constructively applied is through the amendment, and improvement, of building regulations.

The National Building Code is being thus improved as work goes steadily forward toward the completion of the revised edition that will be published in 1960.

Dominating this work has been the preparation of the drafts for the new part IX of the code, minimum standards for residential construction, which (when issued) will take the place of the existing NRC Housing Standards.

Laboratory investigations into the performance of a number of housing elements (roofs, walls, windows, etc.) have continued actively.

A special study was made of all the major house prefabrication techniques at present in use in Canada, primarily in connection with northern building but in such a way that the results will be generally available and widely applicable.

Another special study was made of the problems of farm buildings, other than houses; a lengthy report on this subject was published.

In this way, and through its regular series of publications the Division is continuing its efforts to "bridge the gap" between the information now available in the Building Research Centre, notably in the library with its 100,000 items, and the practice of building throughout Canada.

The library is now prepared to send its monthly accession lists to offices and other libraries that request them.

The division continues to maintain close liaison with all other building research organizations throughout the world so that duplication of effort can be minimized, and the sharing of information extended as widely as possible.

As indicative of this international co-operation, the assistant director (Dr. N. B. Hutcheon) spent the first two months of the year as the guest of the Central Building Research Institute of India, returning to Canada by way of Singapore, Hong Kong and Japan — where he was also warmly welcomed by building research workers.

The writer had the honor of being recently elected as the only non-European member of the small executive committee of the Conseil International du Batiment pour la Recherche l'Etude et la Documentation (CIB), the international building research association.

Glu-lam Sets Up Quality Control

Glu-lam construction is assuming an increasingly important place in Canada's big construction field.

Glu-lam—structural glued laminated timber — has a quality control program designed to ensure that all glu-lam manufactured is of the highest quality.

Here are the steps the glu-lam industry has taken to assure the public of a structurally safe product, and to effectively prevent any disasters occurring with a quality controlled product:

First step was to survey the methods used by other industries in controlling quality.

Regulations of the Canadian Welding Bureau on welded steel construction, the practices of the Underwriters' Laboratories, and other similar inspection programs were carefully analyzed.

Their best points were borrowed to set up the CITC qualification code for manufacturers of structural glued-laminated timber.

During the process of development of the code, quality control practices of industry members gradually swung into line with a uniform industry-wide standard.

Every step of the laminating process is controlled under the **CITC** code.

It requires first that all of the manufacturing requirements of CSA specification 0122, for the manufacture of glued-laminated softwood structural timber, be adhered to.

- **It also requires** that every set of plans be checked by a registered professional engineer to make sure that they are structurally designed according to building code requirements.

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After careful consideration of all factors, the Franklin Manufacturing Company (Canada) Limited, manufacturers of major electrical appliances, selected the City of Galt for their first plant in Canada. Construction for this large building, with a floor area of 243,000 sq. ft., was commenced in May 1958 and the plant was turned over to the owners for occupancy in November the same year . . . ahead of our promise of thirty-two weeks delivery.

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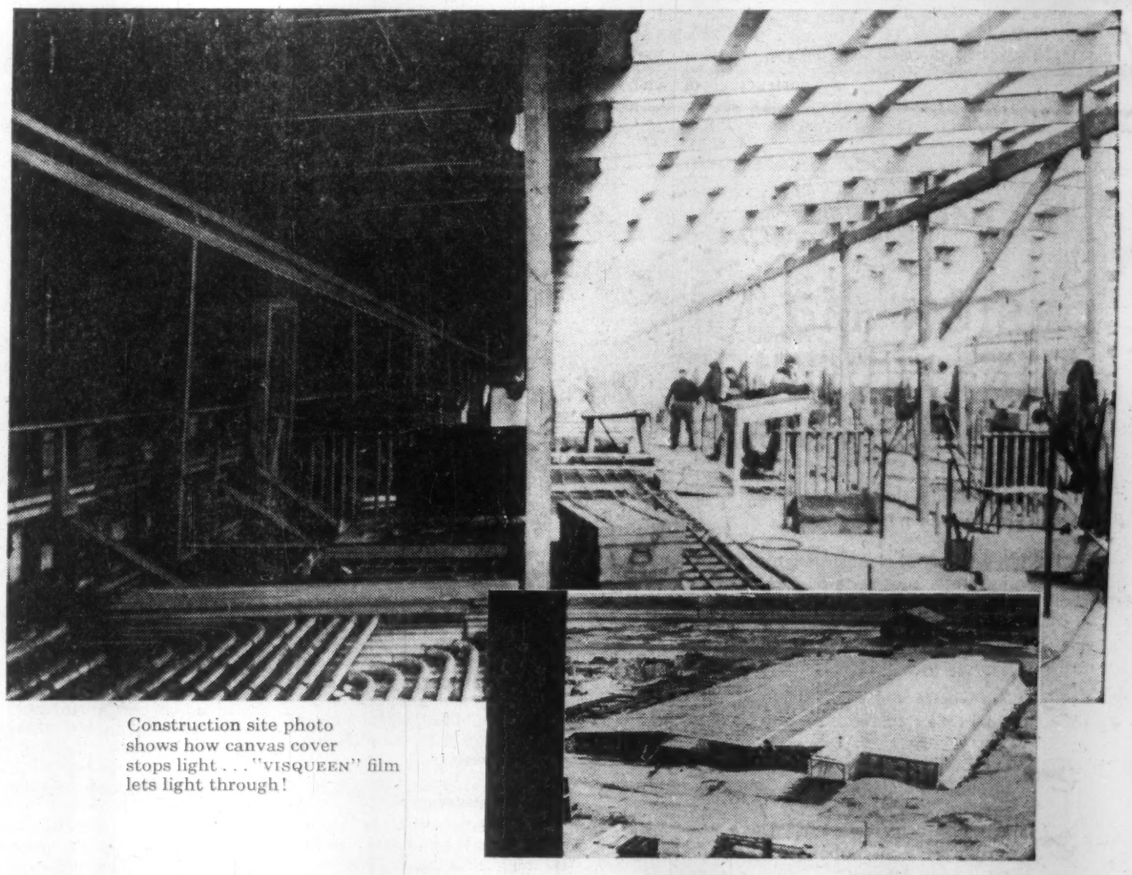

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NHB Will Spend $27 Million Improving Eight Big Harbors

The National Harbours Board will spend up to $27 million this year improving the eight big federal harbors and the two government-owned grain elevators.

Reasons:

- **To catch up on harbor remodeling.**
- **The need to provide for fast, efficient handling of cargoes.**

Chief beneficiary: **Montreal.**

The eight NHB harbors are Halifax, Saint John, Chicoutimi, Quebec, Three Rivers, Montreal, Churchill and Vancouver. They are now used at about 80% capacity.

The grain elevators are at Prescott and Port Colborne, Ont.

These facilities represent a capital investment of around $300 million.

The 1959 work program involved $22 million in capital works and an additional $4 million for maintenance.

Here is a summary of work done in 1959 and a rundown on the harbors and grain elevators:

HALIFAX

Situated on the Atlantic coast of Nova Scotia, the harbor is approached directly from the ocean by a channel with a minimum depth of 50 ft. at low tide. It is open for navigation year round.

NHB operates wharves and piers having about 19,000 linear feet of berthing which provide 32 deep water berths.

There are 21 transit sheds with an aggregate floor space of 1,290,000 sq. ft. In addition, the board operates a grain elevator, marine tower and a cold storage terminal.

New work:

A new transit shed on Pier A-1.

Inner berth on south side of Pier A-1 was deepened.

SAINT JOHN

Situated at the mouth of the Saint John River, on the north side of the Bay of Fundy, the harbor is open to year-round navigation. It is accessible from the sea by a main channel 600 ft. wide with a minimum depth of 30 ft. at extreme low tide.

NHB operates wharves and piers with about 14,500 linear feet of berthing, providing 27 deepsea berths and six berths for coastal shipping.

There are 16 transit sheds with a total floor space of 991,000 sq. ft.

The grain elevator has a storage capacity of 1,576,000 bu. Two locomotive cranes and one 65-ton floating crane are also maintained.

CHICOUTIMI

The harbor of Chicoutimi is situated on the Saguenay River about 75 mi. from its mouth. The Saguenay flows into the St. Lawrence River 120 mi. from Quebec City.

The facilities operated by NHB include 2,750 linear feet of wharf, with five berths for ships of 26-ft. draft and one for coast vessels, a 400-ft. by 200-ft. transit shed and other accommodation.

New Work: An oil wharf was completed in 1959.

QUEBEC

Open to navigation for about nine months in the year and coastal navigation the year round, Quebec can accommodate 27 deepsea ships and 14 coastal vessels.

There are nine transit sheds, 23 miles of railway track, a grain elevator with a capacity of nearly 6 million bu., marine towers, cold storage warehouse, a fish-house, floating crane of 75 tons capacity and three locomotive cranes.

New work:

Dredging was carried out in 1959 in preparation for the construction of a new wharf on the north side of St. Charles estuary.

The construction of a new 2 million bu. addition to the grain elevator and the construction of a new fast unloading grain berth with connecting galleries were completed.

THREE RIVERS

At the confluence of the St. Lawrence and St. Maurice Rivers, about 81 mi. below Montreal, Three Rivers is open to shipping for about nine months of the year beginning April.

Facilities operated by NHB include 8,600 linear feet of wharves which provide 18 deepsea berths, with a minimum water depth of 30 ft., and two berths for coastal or small vessels. There are 10 transit sheds with a total floor space of 290,000 sq. ft.

New work:

Construction of a new wharf at section 20.

MONTREAL

Montreal, which is around 1,000 miles inland from the Atlantic coast, has a ship channel with a minimum depth of 35 ft.

The board operates main piers, wharves and jetties providing 125 berths, totaling about 11 mi. of berthing accommodations; 34 transit sheds, with a total floor space of 2.7 million sq. ft.

Also four grain elevators (16.7 million bu.) and four miles of grain conveyor galleries.

There is also a cold storage warehouse with a capacity of 2.9 cu. ft. A 75-ton floating crane and six locomotive cranes are available.

New work:

The bulk of the program of renovating and extending the grain handling facilities, which was commenced in 1955, was completed in 1959.

Under construction:

The relocation of MacKay pier by dredging is well advanced.

Dredging the approach channel to wharves at sections 58 to 65 was completed and dredging for wharf at sections 50-53 is also well advanced.

Construction of wharf at sections 94-96 was completed except for the installation of services.

Construction of wharves at sections 100-102 and 55-56 are well advanced.

One-half of a transit shed 1,500 ft. by 150 ft. on the wharf at sections 62-65 was completed in 1959 and construction on the second half was commenced.

Construction was commenced on a new transit shed at section 50.

Construction of new grain elevator B-1 with a capacity of 1,800,000 bu. was completed.

Renovations to grain galleries at Elevators Nos. 1 and 2 were completed.

Construction of new towers and receiving facilities at Elevator No. 1 was completed.

Renovations to grain galleries at Elevator No. 3 were completed.

Construction of marine towers, receiving galleries and scale tower on Tarte Pier was completed.

Reconstruction of grain gallery No. 555 and extension to gallery No. 48 was completed.

Several contracts for the piers and superstructure were awarded for Champlain Bridge and this work is proceeding on schedule.

Work on the improvements to the south approaches of Jacques Cartier Bridge was nearly completed.

PRESCOTT

Prescott elevator, on the St. Lawrence River, is 118 mi. upstream from Montreal and 60 mi. downstream from Kingston.

The facilities operated by NHB include a grain elevator with capacity of 5.5 million bu. with four traveling marine towers. There is 5,400 linear feet of wharf.

New work:

The grain loading facilities were renovated so that ocean ships can be loaded.

PORT COLBORNE

Port Colborne elevator, at the Lake Erie entrance to the Welland Ship Canal, has a capacity of 3 million bu. There are 2,400 linear feet of wharves.

CHURCHILL

At the entrance of the Churchill River on the west side of Hudson Bay, the port is open for navigation from the middle of July to the middle of October.

Facilities operated by the board include 2,055 linear feet of wharf providing four deepsea berths with a minimum of 30 ft. at low tide and a berth for coastal ships with a minimum depth of 15 ft.

The grain elevator can store 5 million bu. and the galleries and spouts can load three ships at a time.

There is a locomotive crane of 15-ton capacity, a 10-ton floating crane and a slipway which can handle ships up to 1,200 tons weight.

VANCOUVER

The harbor is situated in Burrard Inlet with direct access to the Pacific through the Straits of Georgia, and Juan de Fuca.

The entrance channel to the harbor, which is open the year round, has a minimum dept of 39 ft.

The board has piers, wharves and jetties with 9,500 linear feet of berthing, providing 17 deepsea berths and three coastal berths.

There are six transit sheds with total capacity of 576,000 sq. ft.

The board's four grain elevators have a total capacity of 9.7 million bu. and a loading capacity of 200,000 bu. an hour.

There are also storage tanks (870,000 gal. capacity) for fish and vegetable oils, open wharves, booming grounds and scow pools for timber.

Three special wharves are also provided for the fishing industry, one having an ice plant and freezing equipment for processing fish.

New work:

The 1,200-ft. long by 550-ft. wide Centennial pier was completed in 1959.

A transit shed and an office building on the pier were being built.

Big Mechanical Mole Digs Sewer Tunnel 2 Mi. Long

A 60-ton mechanical mole has just completed its first job after working underground for a year at depths of from 35 ft. to 100 ft. below grade.

The unique machine brings something new to the art of tunnel construction in Canada.

Nicknamed "Foundation Humber," the tunneling machine has ground a tunnel more than 2 mi. long and approximately 11 ft. in diameter to serve as a trunk sewer leading to a new sewage treatment plant at the mouth of the Humber River in western metro Toronto.

The 12,000-ft.-long tunnel runs north and south along the west side of the Humber. It's located mainly in rock—mixed shale and limestone—through which the machine burrowed its way without disturbing the heavily built-up areas all around.

Latter was a prime requirement imposed on bidders for the job by consulting engineering firm, **James F. MacLaren Associates** and by the sewage treatment division of metro Toronto's department of works.

Engineers of **Foundation Co. of Canada Ltd.**, worked closely with the late **James S. Robbins** whose design engineering firm had developed this type of tunneling machinery.

Modified by Foundation engineers, the machine began its work about a year ago after the company had especially trained three shifts of operating engineers for the demanding job of running the complex machine.

The machine paced its progress with the reinforcing and concreting work which was being done behind it. It's capable of burrowing through the type of rock in the area at a much faster rate than would be possible using conventional tunnelling methods.

From the point of view of **Foundation Co. of Ontario,** subsidiary of Foundation Co. of Canada doing the Humber tunnel job, one of the most important advantages of the giant machine has been the good public relations it has produced in the built-up area under which it has been working.

Disruptions to community life and claims for vibration or blasting damage, which usually accompany tunnel construction when it is done by more conventional methods, have been avoided.

The only evidence that Foundation Humber was burrowing away deep below ground was the appearance of trucks carrying concrete which they poured through holes in the ground down to the tunnel.

The concrete was collected in the tunnel in a concrete placer, and conveyed pneumatically into position on the inside surface of the tunnel in a 12-in. thick layer. This produced a continuous sewer pipe some 2 mi. long and 8 ft. 9 in. internal diameter.

Foundation Humber is an imposing piece of equipment. Two 200 hp electric motors drive the business end of the machine — a 15-ton circular revolving head which carries the cutting discs.

As the revolving head chews its way through the ground, the excavated material is automatically passed behind the cutting head onto an elevated conveyor belt system.

This carries the material behind the machine dumping it into a train of 3-cu.-yd. cars which sit under the machine.

The operator of the train backs the cars under the giant machine until they are all full, then moves down the narrow gauge rails, carrying the excavated material to a dumping area outside the tunnel.

A switch in the tracks enables an empty train to move under the tunnelling machine as the full one leaves.

The 4,000-v. electrical power required to operate it is carried through a heavy neoprene jacketed flexible cable.

Special connectors are built into the cable to allow for extension as required.

Navigation of the machine — keeping it on course underground — seems like one of the big problems in a job of this sort, but Foundation survey teams plotted the course and kept the giant machine on it.

They had a practical test of their accuracy when the tunnel came to the point where it passes under the Humber River. Here, while the river was temporarily diverted, Foundation crews had previously open-cut a route across the bed, covered and waterproofed it, and put the river back on course.

As the machine came out of the embankment below the floor of the valley, it had to meet this previously-constructed tunnel.

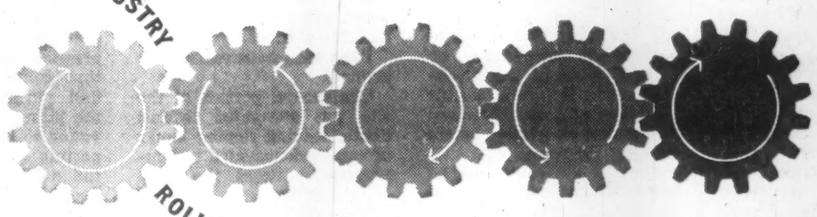
"The engineering was so precise," says J. P. Locket, vice-president and general manager of Foundation Co. of Ontario, "that the ends of the two tunnels met exactly, both as to line and elevation."

According to Mr. Lockett, Foundation Humber's performance on this tunnel project:

"Has proved out a large number of possibilities for use of the machine.

"It not only represents a distinct advance in technique in this field, it also makes practicable a number of developments which have been kept in the 'dream' stage because of the limitations of conventional techniques and equipment."

ATLAS SPECIALTY STEELS KEEP CANADIAN INDUSTRY ROLLING



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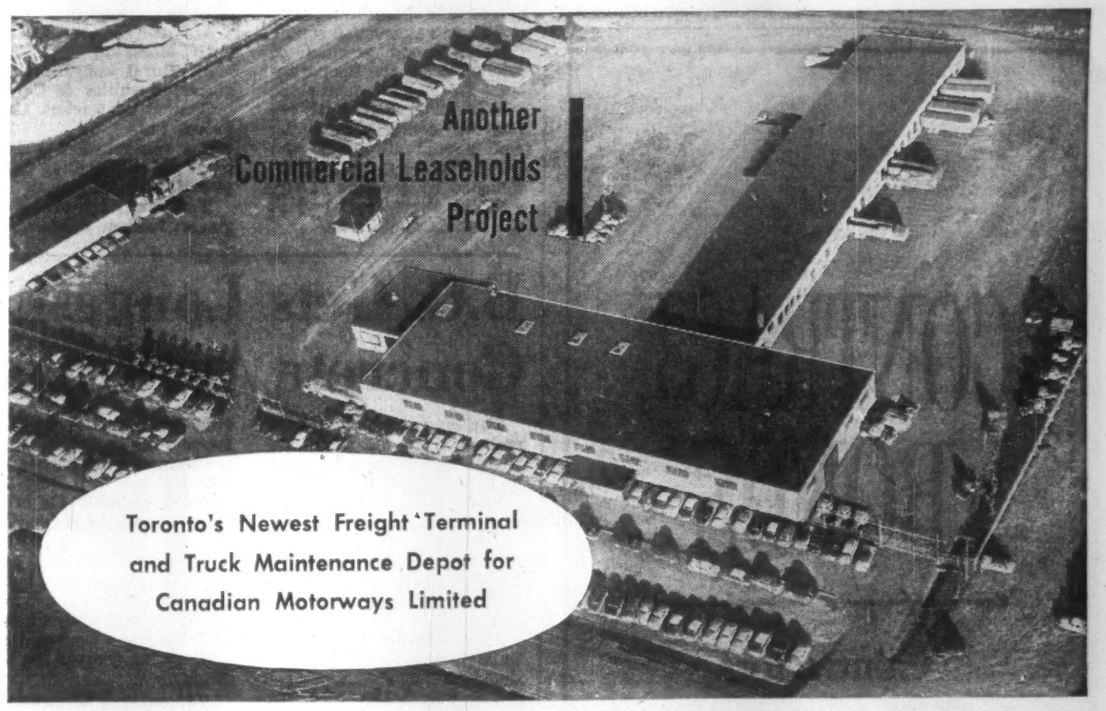

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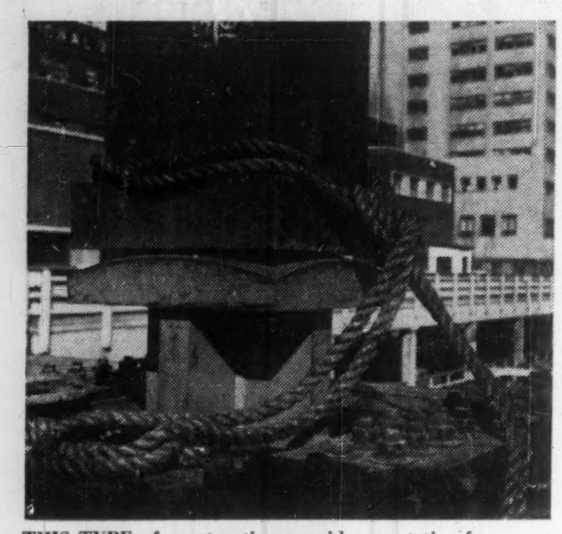

THIS TYPE of construction provides a rotation-free connection, enabling the girders to deflect freely when their ultimate load is imposed.

CNR Steel Frame Draws Attention

As the steel fabric of **Canadian National Railways** new headquarters building, which was started Sept 10, began to take shape, Montreal's sidewalk superintendents were treated to a view of steel building framework construction never before seen in the city. It is unique in Canada.

The extraordinarily heavy girders and odd-shaped trusses excite many comments.

A bystander was heard to remark: "They seem to have been put in any old way—sort of higgledy-piggledy."

They are, of course, carefully thought out and calculated to offset peculiar structural problems.

Because the basement of the building consists of seven railway tracks, the basic supporting columns had to be placed where track clearances permitted, forming an irregular pattern.

But regular spacing of columns is required for the upper floors.

The transition between the regular grid of the office floors and the irregular one at track level was achieved by heavy girders and trusses between the first, second and third floors.

The girders and trusses are as strong as those used in bridge construction in order to "pick up" the heavy loads of the tall office building columns and carry them down to the track columns.

One of the large trusses had to be put in canting on an angle to allow one end of the truss to rest on the top of the neighboring girder.

At another location, the ends of the two 50-ft. girders meet at one point on top of a column. They have been given pivotal connections to the column below and the column above. The result is a rotation-free connection enabling the girders to deflect freely without causing too great stresses to the columns.

The 17-story construction will be completed in May, 1961.

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Quebec Hydro Sub-Station Built in 'Biggest Ice Box'

When construction crews of **Dominion Bridge Co.'s** Montreal branch moved in about the middle of May last year to start erection of 8,000 tons of steelwork for the below-ground portion of Hydro-Quebec's new sub-station and office building fronting on Dorchester St., Montreal, they literally walked into what was perhaps the biggest man-made ice-box ever fashioned.

The unusual combined "deep freeze" and shoring idea devised by the structural consulting engineers was part of the solution to a tricky excavation problem faced by the contractors.

Montrealers last year sweltered through one of the hottest summers on record. Daytime temperatures consistently hit the high 80s. Even at night, thermometers seldom registered below the 60 deg. mark.

Yet, throughout it all, despite the heat, at this particular spot in Montreal's mid-town district, a wall of earth 30 in. thick surrounding a whole city block was kept solidly frozen to a depth of approximately 60 ft. below street level.

Because of loose soil conditions, a high water table and the close proximity to busy streets and buildings on all four sides of the block-square site, it wasn't feasible to follow the usual method of complete excavation before erecting steelwork.

First of all, some method had to be devised to prevent the sides of the huge hole from caving in as earth was shoveled out.

This was partially accomplished by building a surrounding retaining wall of vertically driven cylindrical steel caissons of 20-in. diameter and spaced 3 ft. apart. These were partly reinforced inside with heavy "H" steel column sections and filled with concrete.

A continuous flow of refrigerating brine through pipes sunk deep in the ground on the outside of this wall provided the freezing effect. The purpose was to prevent water and loose earth from seeping between the cylindrical piles.

Escape of moisture from the soil in the surrounding area could have caused serious settling and shifting of nearby buildings, many of which are not built on bedrock foundations.

Even this, however, wasn't enough.

The central portion of the site was excavated to full depth, leaving sloping banks of earth unexcavated to temporarily buttress the steel caisson wall.

A central core of steelwork was completed up to street level by DB construction crews and then extended outward on four sides at this level to provide a first permanent lateral support.

This consisted of systems of column-supported heavy horizontal struts in both directions bearing against what engineers call a "waler" — a heavy built-up "H" section along the piling wall in a horizontal position.

Steel erection and earth excavation then proceeded level by level on a turnabout basis with steelwork being extended to "walers" at three of the five levels. Provision was made for horizontal movement at two levels.

As steelwork was completed at each level, bulldozers moved in to "clam" out earth.

All earth excavation is now completed and erection of steelwork for the temporary stage finished. The next stage will involve a 5-ft.-thick reinforced concrete retaining wall poured all around the excavation to its full depth, followed by concrete floor slabs at street level and at the bottom of the hole.

Finally, lateral steelwork below street level will be gradually released from compression loads and cut loose, thus converting it from its first purpose of buttressing the piling wall during excavation to its final job of supporting heavy equipment for the sub-station and garage floors.

In this way, the 5-ft.-thick concrete walls will gradually take up the full pressure released by the steelwork and transfer it to the top and bottom slabs.

Two other intermediate levels known at this stage as "floating floors" will be integrated in the front part of the foundations.

A portion of the sub-station which will occupy half the site will have no intermediate floors so as to provide ample accommodation for the huge transformers to be installed. The pouring of slabs at intermediate levels and dividing concrete walls will complete the sub-structure.

A 24-story office building topped by three mechanical floors will be erected above the other half of the site fronting on Dorchester Street.

Architect is **Gaston Gagnier,** Montreal.

Structural consulting engineer: **Brouillet & Carmel.**

General contractor: **Collet Frères Ltd.**

The refrigeration contractor was **Parco Drilling & Exploration Co.,** Montreal.

Mechanical consulting engineer: **Leblanc & Montpetit.**

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B.C. Gets Longest Concrete Arch Span

The longest concrete fixed arch span in the Commonwealth is nearing completion in British Columbia.

The 345-ft. long concrete arch will be one of two arch supports for the 615-ft. long Capilano Canyon bridge, a key link in the Upper Levels section of the Trans-Canada Highway.

Perini Pacific Ltd. is the builder. Completion is scheduled for May.

The new bridge is a 10-min. drive from the heart of Vancouver's financial district, over Burrard Inlet to the North Shore, in one of the most picturesque residential areas on the continent.

It is being built over the scenic Capilano River, well known as a fine stream for Steelhead fishing.

A high degree of planning and use of construction techniques were called into play by the Perini group on this $537,289 project.

Because of the time factor on the job and because the Capilano River can change from a trickle to a rushing torrent in a few hours, speed became an essential ingredient.

Perini Pacific decided on fixed arch spans.

Reasons for the decision:

- **Arch spans can be built more rapidly,** as opposed to the more common hinged arch design.
- **Concrete for the fixed arch can be poured non-stop.**

The rapid concrete pour played a vital role in the operation.

Before the fixed arch concrete was poured, a falsework had to be erected. Four pyramid-shaped steel towers, tied together with glue-laminated timber trusses, rose from the riverbed to support the graceful arch.

Placing of the trusses was handled by two high-line derricks on each side of the Canyon, plus the rigging material.

Using the high-line cable setup the trusses were installed on the towers in five 8-hr. shifts. A deck on the trusses then formed a workbridge as well as the floor of the arch form.

The unusual falsework design was planned for pouring one arch at a time.

When the pouring of the first arch was completed, the towers and trusses were moved 34-ft. into new position for the pouring of the second fixed arch.

When it came to the actual pouring of the concrete for the first arch, last December, the high-line came into play.

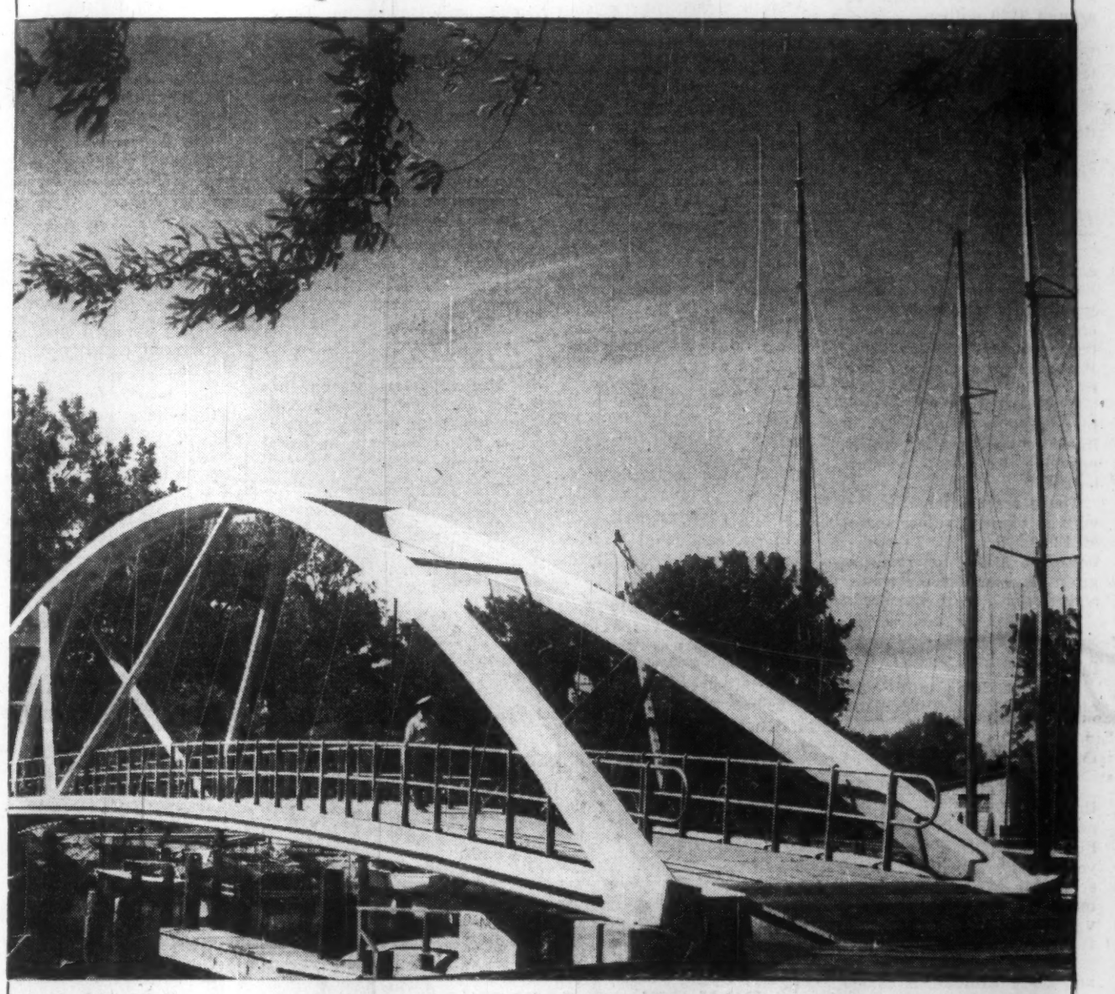
With telephones located at key positions along the arch, the high-line toted 3-cu. yd. concrete buckets direct from transit trucks to pouring positions. The operator of the cable system winch was able to lower the huge buckets to within inches of the pouring funnels.

The continuous pour of 600 cu. yd. of concrete was completed in about 33 hr.

It began at each end of the arch and worked to the centre with transit mix trucks delivering concrete to the site and buckets being loaded alternately from the mixers.

Upon completion of the pour, stripping of the forms was planned as a gradual operation. The overhead form came off a day later, the sides came away a week later and the bottom was removed after 28 days allowed for curing.

ST. LAWRENCE CEMENT



...shapes the future
...assures stability

Precast-prestressed concrete manufacture and erection is the bright, new, expanding market for the concrete products industry. The slender arched bridge illustrated utilizes a bowstring truss construction with canted top-chords to provide a clear span of 160 feet. Toronto Cast Stone Company Limited did the job. Here is a fine example of a happy union of the aesthetic and functional made possible by concrete.

ST. LAWRENCE CEMENT CO.

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598R

Automation Lets Guard Keep an Eye on Plant

Investigation of the industrial building market, particularly industrial plants in the past few years, has brought to light an area which has not caught the eye of a cost-conscious management.

It's plant protection and security.

Generally, security is lost in the general classification of operating overhead and the usual argument is that "it's a necessity, it costs money and it's non-productive but there isn't much that can be done about it."

Companies that have attempted to get more for their security dollar have generally done so by assigning their protection forces additional duties far beyond those usually associated with the word "guard". But they haven't been too successful in this.

The problem, however, is being licked by automation.

One guard, now can keep under constant surveillance an entire building or factory operation, even one sprawled over several acres with many entrances, by means of a guard console and one or more subsystem panels.

Heart of the integrated system is the centralized control console called a security control centre.

The recently introduced system, which has been termed an electronic watchdog, can, in fact, do a far more effective policing job than the guard force that is maintained in a typical industrial setup.

One guard, sitting at a console, can immediately detect fires, keep an eye on remote entrances by means of closed circuit television.

He can detect any unauthorized entry, from a burglar trying to sneak into the grounds to a thief quietly trying to steal from file cabinet in an isolated room in the building.

Should the guard at the control centre himself be overpowered by an intruder or collapse from illness, a built-in safeguard in the system automatically flashes a warning to police headquarters.

The surveillance is accomplished with a network of remotely located electronic detection devices tied into the master control panel.

These include a number of new electronic developments such as noise and motion detectors and an electronic fence which **Honeywell Controls Ltd.** executives say "really works".

Also included are more conventional devices such as TV cameras at entrances, magnetic switches that unlock gates from the central station, fire detectors and holdup alarm switches.

While some of these devices previously have been available as separate units, the new system introduces for the first time the concept of integration of such devices under centralized control.

Use of the new automated system, it is estimated, would reduce guard salaries alone by 50%. In addition, say Honeywell representatives, the automated security system provides 100% security at all times compared to an estimated 10% over-all effectiveness of a guard making his rounds in a large industrial building.

Cables Support Swim Pool Roof

A network of steel cables supporting a concrete slab roof—the first of its kind in Canada—is one of the unique features of an indoor swimming pool of ultramodern design for a new sports centre being built at Maisonneuve Park in Montreal's east end.

Dominion Bridge prepared and installed the cable suspension system, a job involving intricate geometrical calculations because of the interplay of convex and concave contours.

The main load-bearing cables, strung crosswise, are 1.9/16 in. and 1.3/16 in. in diameter. They were prestressed, precut and socketed at **DB**'s prestressing plant at Longueuil, near Montreal.

Tie-down cables, strung in the other direction, are ¾ in. in diameter. All are galvanized bridge strand cables.

Precast concrete roof slabs were hung within the squares of the network formed by the criss-cross cables.

In plan, the building is shaped like a huge ellipse with pointed ends, 22 ft. long from end to end, 164 ft. at its widest point. In end elevation, the contour is also unusual.

Two arched ribs fan out from the top of a 28-ft. high buttress at each end, sweeping outwards and upwards to the widest point of the building.

Architect: **Paul E. Lambert** (Montreal).

Consulting engineer: **Beaulieu, Trudeau & Associates,** Montreal.

General contractor: **Omega Construction Co.,** Montreal.

Dominion Bridge were the subcontractors for the supply and erection of the cable roof.

The shape of the building in plan is dictated by two large concrete arches parabolic in shape. The over-all dimensions are 224 ft. x 164 ft.

These arches are inclined in section with their crowns located 27 ft. above their springings.

The arches form a cradle in which steel cables are strung to carry the roof.

The load carrying cables are galvanized bridge strand hanging freely between the two arches. They are of highest quality steel and prestressed by usual suspension bridge methods.

They were marked under working load, then cut and socketed under close inspection.

This procedure proved to be very effective as the cable lengths checked themselves when in their final erected position.

The cables hang in the shape of a catenary with the cable tangent to the plane of the arch at its anchorage.

Over these load carrying cables (called principal cables) are strung secondary cables. The secondary cables, due to the geometry of arches and principal cables, form a smooth convex curve in section.

As these secondary cables are tightened, they introduce a superimposed load on the load carrying cables.

The load or prestress is utilized as a tie down effect, which dampens vibrations in the roof and prevents roof deformation, due to unsymmetrical loading of snow or wind.

The cables are spaced at 5 ft. centres in both directions, forming a large net.

The roof design load was 90 lb. per sq. ft. composed of 50 lb. per sq. ft. dead load and 40 lb. per sq. ft. snow load.

The roof slabs are precast concrete, about 5 ft. square, which fit between the cables and hook over the cables with plate hooks anchored in the slabs. The spaces between the slabs and the cables are filled with mastic.

The roof slabs are covered on the underside with a layer of limpet asbestos and on the top with insulation and a tar and gravel roof.

There is no load carried by the secondary cables.

They were prestressed to 20,000 lb. tension each at the time of erection, which is decreased as load is added to the roof, but is never slackened off completely.

The load of the roof is transmitted to the arch by the principal cables through 3 in. diameter and 2¼ in. diameter anchors in the face of the arch. These loads introduce compression and bending into the arch, which are resisted by reactions at the springings.

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Company Reports

Standard Paving & Materials Ltd.

Standard Paving & Materials Ltd., Toronto, through subsidiaries, operates as a street and highway paving contractor, and supplies sand and gravel for all types of building and construction work throughout Ontario, Quebec and the Maritimes.

In the construction division, wholly owned **Standard Paving Ltd.** operates in Ontario and Quebec, and **Standard Paving Maritime Ltd.** in the Maritime provinces.

Wholly owned subsidiaries in the supply division are **Consolidated Sand & Gravel Ltd.** and **Guelph Sand & Gravel Ltd.,** producing construction aggregates and mixed asphaltic materials at Paris, Guelph and Freelton, Ont.; and **National Sand & Material Co.** which supplies aggregates to ports on Lakes Ontario and Erie.

Partly owned **Concrete Pipe Ltd.** manufactures plain and reinforced concrete pipe at Toronto and Woodstock, and **Mixed Asphalt & Contractors Supplies Ltd.** produces mixed asphaltic materials in Hamilton.

In the ready-mix concrete division, **E. V. Breckon Ltd., Mixed Concrete Supply Ltd.** and **Red-O-Mix Concrete (Hamilton) Ltd.** supply ready-mix concrete in Hamilton, Chippawa, Welland, St. Thomas, London, Brantford, Guelph and Burlington.

Oshawa and Ajax areas are served by wholly owned **Curran & Briggs Ready-Mix Ltd.** and Metropolitan Toronto area by **S. McCord & Co.**

Company owns one third interest in **National Slag Ltd.,** Hamilton, formed in 1953 to process blast furnace slag. Plant expansion completed in 1958 permits a wider size range of products.

In the seven years ended March 31, 1959, Standard Paving spent over $10 million on acquisition of subsidiary and associated companies and on properties, plant and equipment.

All these expenditures were from accumulated earnings, President J. H. Reid states.

Consolidated net profit of $1,229,560 in year ended March 31, 1959, was 4.6% higher than previous year's $1,175,070. Per share earnings (adjusted for three-for-one stock split in July, 1959) were $1.20 in 1958-59 ($1.37 year before).

In the six months ended Sept. 30, 1959, net was $995,633 (97c per share), 6.2% below $1,061,793 ($1.04) a year earlier. Because of seasonal factors, much of company's earnings are generated in the April-September period.

An unsuccessful bid to buy 500,000 Standard Paving shares at $24 per share was made last fall by **St. Lawrence Cement Co.**

Canada Cement Co. recently disclosed that it has a "substantial interest" in Standard Paving and several other companies in the distribution field, acquired last year at a cost of $12.2 million.

Outstanding capitalization at Dec. 31, 1959, consisted of 1,024,296 npv common shares. Annual dividend rate is 80c per share, payable quarterly.

Waterous Equipment Ltd.

Waterous Equipment Ltd., Edmonton, Alta., is engaged in the purchase, resale and service of road and construction equipment and diesel engines in the province of Alberta. Company also maintains offices in Calgary, and branches are located at Lethbridge and Grande Prairie.

Company is one of the largest of some 127 dealerships of the **Allis-Chalmers Manufacturing Co.** It also distributes **General Motors** diesel power units and equipment and other lines of industrial and construction equipment.

Equity Finance Corp., a subsidiary, incorporated in 1955 controls and collects customers' conditional sales contracts.

Net profit for 1958 was $15,674, compared with $152,800 in 1957. Equity Finance, the wholly owned subsidiary, made a net profit after taxes of $40,802, compared with $48,104 in 1957. This profit was not taken into accounts of parent company.

Outstanding capitalization at Dec. 31, 1958, was 196,930 npv common shares. At April 27, 1959, the number of shareholders was 475.

No dividends have been paid on the common stock since Dec. 16, 1957. Dividends totaling 60c per share were paid in 1957.

Due to increased construction programs in the western provinces, and the fact that sales and earnings in the first half of 1959 showed considerable improvement, the 1959 results should show improvement, President W. G. Christian reported.

Waterloo Mfg. Co.

Waterloo Manufacturing Co., Waterloo, Ont., and subsidiaries manufacture, service and distribute construction equipment.

Last December company moved to new premises on 16 acres of land. The new plant covers 53,500 sq. ft., including two high crane bays and office space for engineering and sales departments of 7,500 sq. ft. The move involved disposal to the city of Waterloo of property for $1,136,000. Relocation costs were $600,000 for the company.

Company now owns a controlling interest in **Construction Machinery Co. of Canada,** which makes and sells cement mixers, truck mixers, pumps, hoist and other construction equipment.

An important item in company's lines are ready mix batch plants which allow for one-man operations in the cement products industry.

Company has now three main divisions apart from Construction Machinery Co. The factory makes table rolls, felt rolls, wire rolls, reel bars, etc., and many pieces of machinery and equipment for the pulp and paper industry. It also makes fuel and water tanks for diesel locomotives, construction machinery, aircraft parts, and undertakes a wide variety of jobbing work.

The farm machinery division sells and services the complete line of **Minneapolis-Moline** tractors, combines, corn huskers as well as **Fox Forage Harvesters** throughout the province of Ontario.

Company's boiler division sells and services throughout Ontario the **Cleaver-Brooks** line of oil and gas fired industrial boilers ranging from 15 hp to 600 hp. These boilers are being manufactured by Cleaver-Brooks Co., Stratford, Ont.

Operating results for 1959 were substantially better than 1958, President F. C. Taylor reported.

Net profit for 1958 was $249,061. Earnings per share were $4.86 compared with $2.36 in 1957.

Working capital at Dec. 31, 1958 was $1,041,297, up from $589,067 a year earlier.

A dividend of one half share of $1 par preference stock for each common share held was paid June 30, 1959. Outstanding at Dec. 31, 1958 were 51,280 npv common shares. The $307,680 preference stock issued in payment of common dividend was redeemed immediately.

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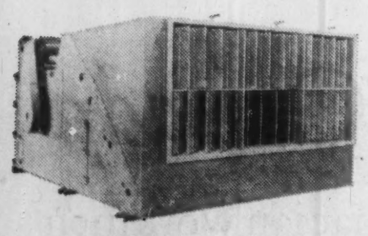
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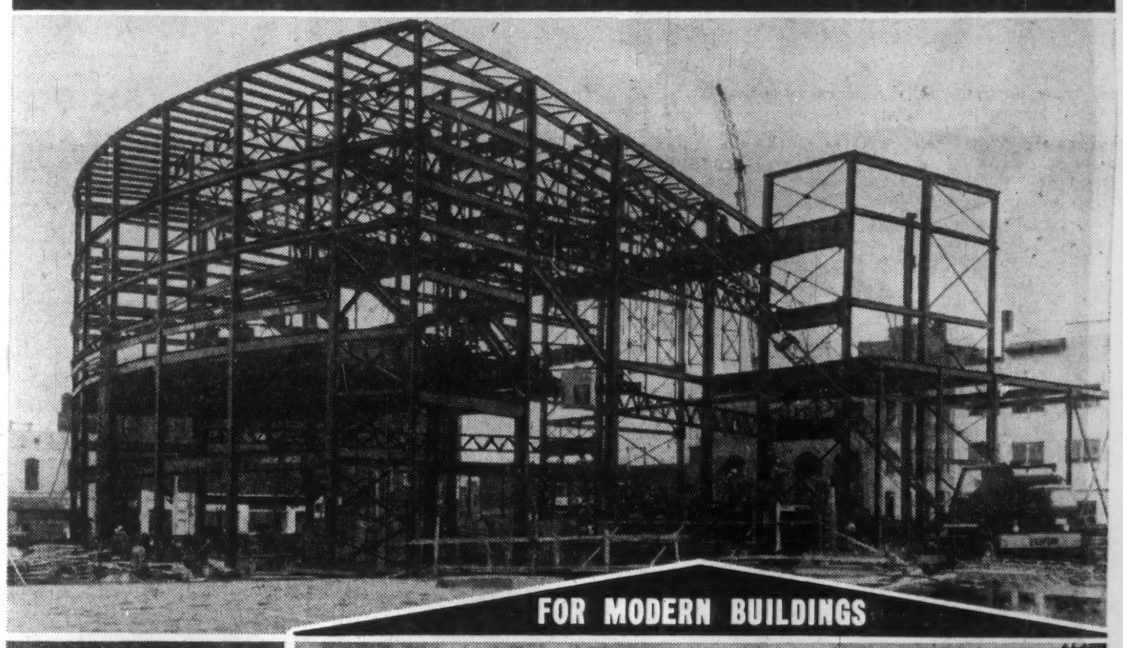
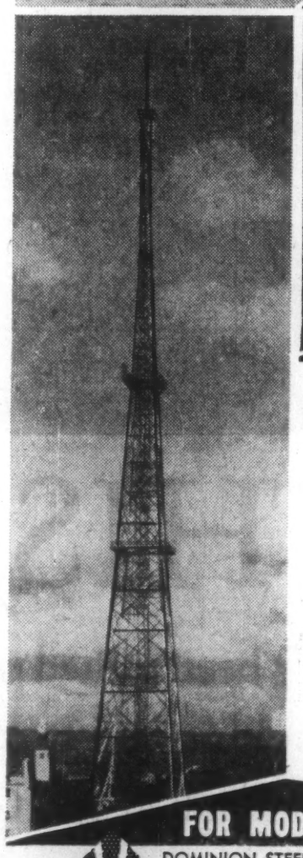


FOR MODERN BUILDINGS



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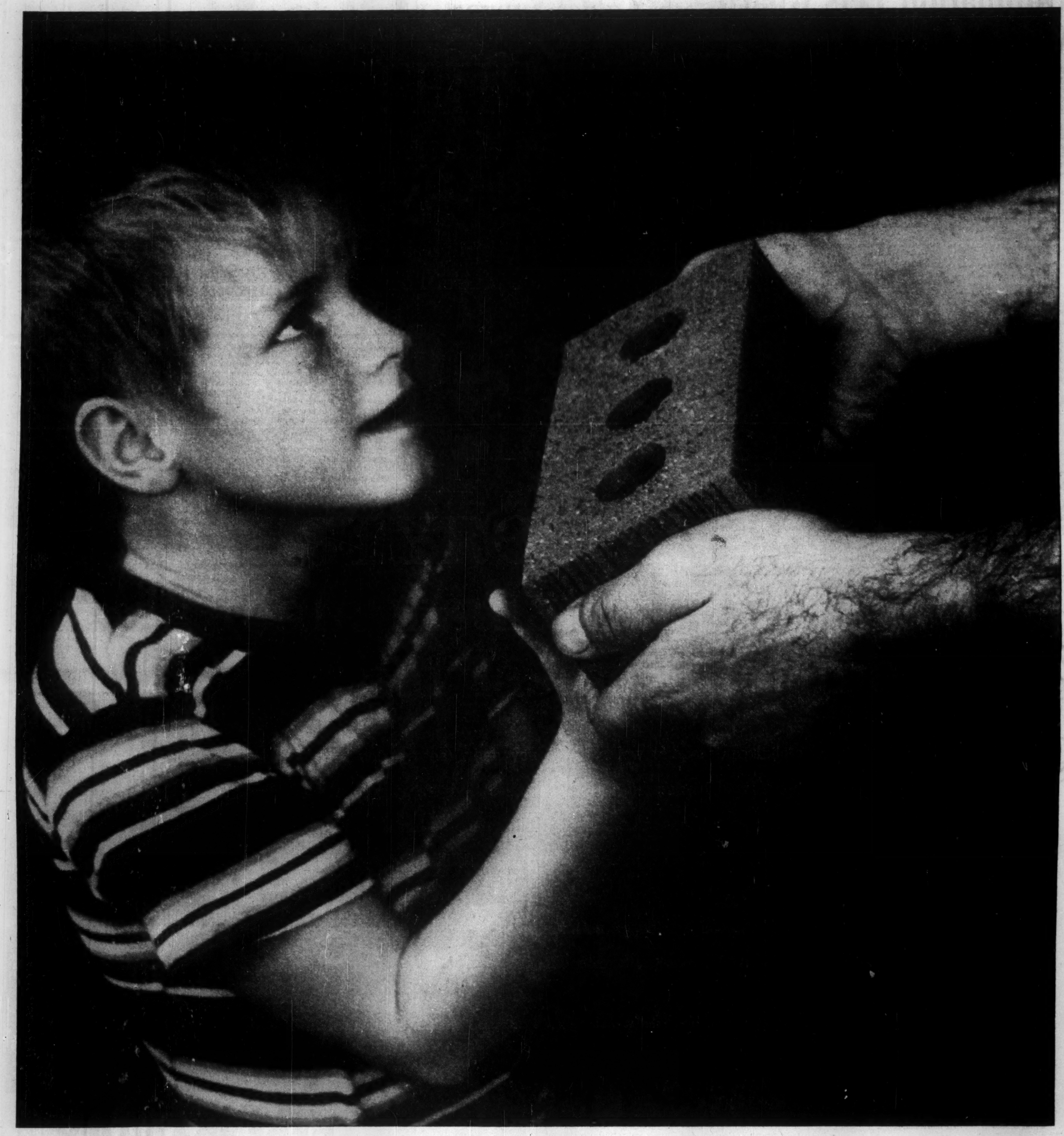

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The Financial Post

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Housing Future Healthy But Buyers More Choosy

Despite dire warnings, new dwelling starts in Canada this year should level out at around 125,000.

This alone means an expenditure of nearly $1,600 million.

Add to this major alterations, supplementary costs, repairs and the total housing bill in 1960 will easily reach $2,000 million.

Value of the new dwelling starts in 1959 is estimated at $1,615 million, the total housing expenditure, about $2,154 million.

Comparable figure in 1958 was about $2,188 million.

In 1959 the 141,345 starts and 145,671 completions was the second highest year on record, second only to 1958.

The 1960 picture is by no means clear.

Approved lenders, particularly insurance firms, are maintaining a cautious attitude.

However, it looks as though:

● **Insurance companies,** which in 1958 supplied conventional mortgage loans for over 25,000 units and NHA loans for almost 16,000 units, will carry out a heavier NHA lending program than 1959. Along with trust companies, they made only about 12,000 NHA loans in 1959.

● **With the impetus of a 6¾% rate,** insurance and trust companies in 1960 may make loans for possibly 20,000 NHA dwelling units.

● **At least 85,000 dwelling units** will be started on conventional and private lending.

● **The government** has over $1,000 million in mortgages already and is anxious to cut its spending.

It would like nothing better than to see the lenders respond enthusiastically to the increase in the NHA rate from 6% to 6¾%.

But it is certain to come through with direct loans to builders again this year to bring the total to at least 120,000 starts, probably 125,000.

● **There's also some suggestion** that banks in smaller centres will make some loans to favored individual customers at 6%, amounting to possibly 4,000-5,000 units.

● **In spite of predictions** of housing glut, sales have been good, except in Toronto and Vancouver.

Right now, the shrewd buyer in the Toronto area can get himself a bargain.

Some builders are willing to cut their price in order to get their houses moving but there's no across-the-board cut in sight and no real alarm becauses houses have been moving more slowly.

In Metro Toronto, single family housing starts were down 25.6% for the year and multiple unit starts down 18.8%.

At year end, there were 1,083 completed, unoccupied houses in metro, compared with 970 at Dec. 31, 1959.

But by all reports, the soft housing picture which existed in Toronto at year-end is ironing itself out and sales have picked up in the past four weeks.

Completed and unoccupied dwelling units in Canada in centres of 5,000 population and over at the end of December, 1959, were 3,484 as against 3,213 at Dec. 31, 1958.

With completions for the two years nearly equal, this is by no means an alarming increase, roughly only a two weeks' supply of housing.

Big increase here was in Montreal where the figure jumped from 48 to 428 units but the size of the increase reflects to some extent, anyway, a lag in reporting rather than any sudden deterioration in market.

Starts for January, 1960 (centres of 5,000 population and over), were 3,731 compared to 4,833 in January, 1959.

There should be considerable activity in house sales in the spring and the psychological effect of the 6¾% rate for new houses to be built should act as a spur.

In his housing program, the builder faces a tough year.

He must aim at the consumer and concentrate on design and not worry just about building houses to fit the price asked and paid for lots.

While there are conflicting reports, there appears to be a flurry of activity on the part of lenders already, at a time when activity is pretty low normally. While it is much too early to prove a definite indicator, the new activity suggests a more hopeful picture for NHA loans.

One major insurance company lender told **FP** that, while some companies haven't formulated definite policies yet on NHA loans, he expects a much stronger lending program this year.

These companies aren't in a hurry and report no real pressure from builders so far.

Some have already allocated some nominal amounts in certain areas.

Starting this month, demand from builders should have lenders showing their hands.

One reason insurance companies proceeded cautiously was the soft housing market.

While it's recognized that this existed until the end of the year anyway, in certain areas, the over-all picture is good now and this isn't causing them concern.

In metro Toronto, there have been few commitments to builders.

Builders who normally have had no trouble getting NHA loans are having trouble now.

Demand for loans from builders in the Toronto area right now is high, reflecting the more optimistic sales picture.

What it shows is that lenders are going to be much tougher and selective this year.

To the benefit of the whole industry, a number of so-called builders and fly-by-nighters, who were only in to make a fast buck anyway, are going to be weeded right out of business.

The government says a minimum of 125,000 starts a year is needed to just meet housing needs. The employment factor ensures that the government will not let starts fall below 125,000.

But again, as last year, direct loans will not come until the fall.

Other highlights:

▸ **Banks are pressed enough** for loans from customers without wanting to get back into the NHA loan market.

The question as to whether or not they could make NHA loans at 6¾%—they are now limited to 6% under the Bank Act—is irrelevant.

Banks are out of the picture this year.

▸ **All the talk about establishing secondary mortgage institutions will remain talk, for this year anyway.**

Housing has been anti-cyclical since the war, dropping when business boomed and vice versa. But in spite of this, no one could call a start figure of 125,000 bad.

▸ The trend to urban centres will continue to grow, forcing cities and towns to move into the suburbs at a rate of something like 100 sq. mi. a year.

▸ **Many small electrical contractors** and other subcontractors this year will move into small industrial, commercial and institutional fields because of the reduced loaning program.

▸ **Prices will be fairly stable** but there will be increases depending largely on how the houses are selling in any particular area.

Cost of construction is up but in many areas, like Toronto, builders will hold the line or absorb the cost.

Builders face a tough buyers' market this year.

For them, apart from shortages of mortgage money, it will be a year of reassessment and a hard look at their business operations.

In the whole construction industry, there's no area where better business management and efficiency is more needed than in housebuilding, by the builders' own admission.

Where, not long ago, builders could sell a house while it was still only a hole in the ground, today they're going to have to pay more and more attention to merchandising, better management, streamlined operation, and design.

Over the next five years, there will be a tremendous boom in apartment block building.

This trend is already evident.

While apartment block building this year will follow the downward housing trend, it will constitute a higher proportion of the total dwelling units than it did last year, probably reaching the 30,000 unit mark.

In Hamilton, Ont., for instance, always considered a city of homes, there was a significant upswing last year in the proportion which apartment buildings took of total dwelling units built.

Very few of them are empty and this strong trend is expected to continue.

For metro Toronto alone, out of 395,000 dwelling units needed by 1980, some 120,000 will be apartments.

There will be a substantial increase in the coming years in the number of high-rise apartments built in connection with urban renewal projects in the urban centres.

What about the demand for houses in the coming decade and after?

These factors show that housing, in spite of occasional sags, is going to be a boom business:

Over the past five years, the number of families in Canada has increased, on the average, by about 80,000 per year.

Number of household groups, other than families, who lay claim to separate dwelling accommodations has been increasing at a rate of around 15,000 a year.

On top of this, there's the loss of and demolition of existing dwelling and persistent migration from rural areas to cities and towns.

These last two factors alone probably add 25,000 units per year to non-farming housing needs which means that non-farm areas in Canada need from 120,000 to 125,000 new units per year just to keep up with the increase and mobility of the population.

In other words, a total annual production of over 125,000 units, by best estimates, is needed to allow a net increase in the standard of housing in Canada.

Housing to date has looked after growth factors alone satisfactorily, as is evidenced by the temporary softening in the market last year in some areas.

But the Gordon commission estimated that 3.7 million new homes would be needed from 1956 to 1980, with the number of families based on estimates of net family formation, together with estimates of formation of non-family households, demolition and the like.

Estimates that the number of families would increase by 348,000 between 1956 and 1960 are now raised to 400,000.

Estimates for the period, 1961 to 1965—originally 414,000—is now figured at 470,000.

Estimates for the final three five-year periods will also likely be higher.

To build the estimated number of dwelling units needed by then will cost over $40,000 million or an average of around $2,000 million for each of the next 20 years.

This is figured as a minimum.

Face-lifting and replacement of old housing will add another $3.2 billion to housing expenditures in the next 20 years.

In other words, while some years are going to be better than others, there won't be any real let-down in dwelling construction in the next 20 years.

War babies reaching marriageable age from 1958 onward should mean a steady increase in the number of marriages with its consequent demand for housing, apartment dwellings followed by houses.

Price of land in urban centres is mainly responsible for the high cost of housing and there's no relief in sight.

One way in which this is being licked, although still on a very small scale:

Land assembly projects such as Hamilton's Buchanan Park and Ottawa's Borden assembly purchase.

Federal-provincial agreements have assembled some 500 serviced lots in Hamilton selling at around $2,700 each compared with a going rate of around $4,000 to $5,000 elsewhere in the community.

On the 613-acre Borden dairy farm land assembly purchase, some 1,700 to 2,000 serviced lots averaging not less than 6,500 sq. ft. will be available in the next five years—about 600 of them this summer.

More of such land-assembly projects are ahead.

For this year these other trends are apparent:

● **Increasing emphasis on good design,** better merchandising.

More split-levels and fewer story-and-a-half houses so popular a few years ago. There are signs that two-story homes are coming back.

● **Experiments now going on in plastics** and other architectural materials will ultimately lead to faster building, consequent economies in labor costs, new design concepts.

Use of these new materials is going to increase gradually. But aluminum siding especially, is going to grow quickly in popularity in the next five years.

● **Economies will undoubtedly come** through the building laboratories of Division of Building Research, National Research Council, and the experimental research homes built by National House Builders Association.

● **Packaged operations** is the keynote of the future.

Just how far this will go isn't clear yet but more and more prefabrication and off-site construction is ahead in the housing field.

Walls will be prefabricated.

Bathrooms and kitchens will be installed as completely packaged units.

Flooring, instead of going down board by board, with consequent loss in time and money, may be laid in 4 ft. x 8 ft. sections.

More house builders will prepare home components off-site for final assembly in the subdivision.

And as this trend grows, more and more subcontractors specializing in prefabrication of the various house components will be in business and the builder himself will more and more become a highly specialized assembler, financier and salesman.

In line with this trend:

A big boom in sales of factory-engineered homes as manufacturers, encouraged by good gains in 1959, go hard after a larger slice of the housing market.

There will be more and more developments where the builder simply assembles his land, chooses his house design, buys them from the manufacturer and uses his own crew to erect them.

● **Pre-installation of appliances,** where the builder buys in volume and installs them in the home before sale, is going to grow in the coming years.

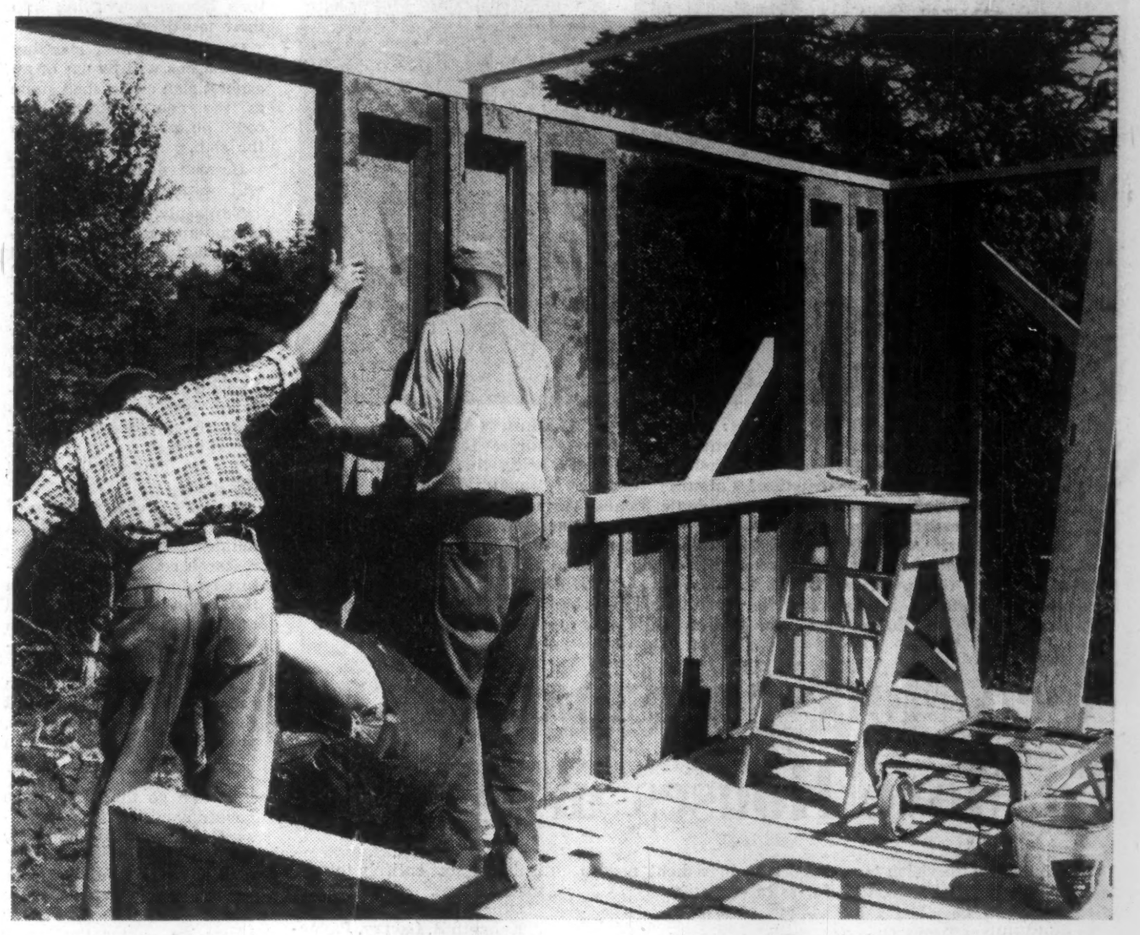
A committee of the Royal Architectural Institute of Canada which is now enquiring into residential development in Canada will hand in its report in the fall.

It could be one of the most significant developments in the housing field in Canada in years.

Compiled by some of Canada's outstanding architects, men who can be expected to pull no punches, it should give impetus to fresh and imaginative design in Canadian homes and in residential development projects and planning for the years ahead.

To the harder-than-ever-to-please prospective home owners in the coming years, all this should add up to original design concepts, greater variety, more individualized homes.

Research to develop new materials, to speed assembly and reduce labor costs could help keep the ever-rising cost of building in reasonable perspective.



PREFABRICATION and off-site construction are marked trends in the housing industry. These precast 18 in. by 8 ft. concrete panels are being erected on a poured cement foundation.

Housing, 1959

HOUSING STARTS AND COMPLETIONS

Year	Starts	Completions	Under Construction at Dec. 31st
1959	141,345	145,671	81,905
1958	164,632	146,686	88,162
1957	122,340	117,283	72,573

LOANS UNDER NHA

Lender	Dwelling Units 1959(1)	Dwelling Units 1958	Amount ($000) 1959(1)	Amount ($000) 1958
Chartered Banks	14,870	26,135	175,716	300,444
Life Ins. Cos....	10,077	15,922	112,712	171,272
Trust & Loan Cos. & others	1,739	4,367	19,413	47,297
CMHC	34,240	38,616	366,862	389,318
TOTAL	60,926	85,040	674,703	908,331

(1) Preliminary

CMHC LOANS UNDER NHA (Gross Basis)

Type of Loan	Dwelling Units	Amount ($000)
Small Home Loans		
Builders	14,293	163,893
Owner Applicants ...	5,438	60,275
Other Section 40	9,740	105,296
Limited Dividend	4,769	37,398
TOTAL	34,240	366,862

(1) Preliminary

N.H.A. HOME IMPROVEMENT LOANS (Gross Basis)

Year	No. of Loans	Amount ($000)
1959	32,607	37,648
1958	37,237	39,801
1957	29,998	30,618

COMPLETED AND UNOCCUPIED DWELLINGS (Larger Urban Areas)

	Dec. 1959	Dec. 1958	Dec. 1957
Unoccupied one month or more ..	2,476	2,655	2,065
Unoccupied less than one month.	1,008	558	699
TOTAL	3,484	3,213	2,764

BUILDERS' SALES NHA (Net Basis)

	1959 Loans	1959 Units	1958 Loans	1958 Units	1957 Loans	1957 Units
1st Quarter .	8,407	8,521	5,151	5,210	4,628	4,703
2nd Quarter	14,399	14,629	5,263	5,332	5,248	5,320
3rd Quarter .	14,194	14,444	6,950	7,066	4,962	5,023
4th Quarter	7,803	7,933	9,619	9,762	6,507	6,557
TOTAL ..	44,803	45,527	26,983	27,370	21,345	21,603

Source: CMHC

New Homes Across Canada

Starts and completions of new dwelling units in Canada in the full year 1959 were lower than in 1958, but higher than in any other post-war year.

Houses under construction at the year-end declined from the 1958 total. Here's a breakdown on 1959 home construction for the whole of Canada and provinces, with percentage change from the 1958 figures:

	Starts 1959	Starts % Change	Completions 1959	Completions % Change	Under Construction Dec. 31, 1959	Under Construction % Change
Newfoundland ..	1,553	+18.6	1,215	+0.8	2,379	—7.1
P. E. I.	434	+91.2	352	+232.9	239	—4.8
Nova Scotia	4,312	+57.1	3,949	+70.2	3,667	+88.8
New Brunswick .	1,828	—32.7	2,345	—27.5	1,053	—13.9
Quebec	36,265	—21.7	38,920	—2.1	17,754	—19.1
Ontario	54,158	—15.1	54,281	—8.8	32,827	—1.7
Manitoba	6,583	+1.2	5,823	+1.4	3,745	+26.6
Saskatchewan ..	6,447	+23.4	6,363	+27.8	2,924	+10.9
Alberta	13,074	—20.9	14,183	+4.6	7,449	—15.3
B. C.	16,691	—13.5	18,240	+12.4	9,868	—16.5
CANADA	141,345	—14.1	145,671	—0.9	81,905	—7.1

Source: DBS

NHBA EXECUTIVES: Seated, left to right: Campbell C. Holmes, (A. Holmes & Son Ltd., and Anndale Investments Ltd., Toronto) president; Maurice Joubert, (Hauterive Developments Ltd., Montreal) immediate past president. BACK, left to right: Denis Sullivan, (Sullivan Bros. Construction, Calgary) secretary; W. M. McCance, (William M. McCance Ltd., Sarnia) second vice-president; Ernest Alexander, (Alexander Const. Co., Barrie) treasurer; Graham C. Lount, (C. T. Lount Const. Co., Winnipeg) first vice-president. Also elected, as regional vice-presidents: Donald Johnson, (Greenall Bros. Const., Vancouver) for B.C.; Robert L. Young, (Laird Const. (Lethbridge) Ltd., Lethbridge) for the prairies; David S. Mitchell (D. S. Mitchell Const. Ltd., Peterborough) for Ontario; Michel Langelier (Bordeaux Housing Inc., Montreal) for Quebec; J. Bernal Sawyer (Commodore Const. Co., Halifax) for the Atlantic provinces.

Need More Salesmanship To Move Houses in 1960

"The builder with vision is the one who's going to get sales this year."

So said William Teron, Ottawa house builder at the National House Builders Association convention in Toronto last month.

Facing a tougher year compared to previous record-breaking years because of tight money and other problems, this remark seemed to keynote the outlook not only for 1960 but for a few succeeding years.

While the still obscure picture for housing in 1960 and the continued shortage of money were major subjects of discussion at this year's convention, builders are being forced to take a new look at their industry.

Besides streamlining their operations, builders are going to have to give a great deal more attention to merchandizing and product design.

An interested audience of some 300 builders heard these comments on merchandising:

- **There will be no "magic wand" in the 1960s** and sales won't be made on wishful thinking. Anything built is going to have to be sold — sold in a sense unknown in the past 10 yr.
- **The home buyer today** is intelligent and discriminating. He wants quality in construction, but without quality treatment from builder and salesman — no sales.
- **The gimmicks** which are standard with any good salesman selling to the public must be adapted by the house building industry — with emphasis on the importance of primary contacts with prospective purchasers.

Included: telephone manners, quality letterhead, signs, literature, promptness in answering enquiries, reputation.

These, said one expert, set the "tone" of a building operation and are vital, regardless of the price brackets of homes.

Richard Locke, vice-president and advertising director of **Engineered Buildings Ltd.**, Calgary, had some pungent comments to make on classified advertising which, he said, is misused by many builders. He said:

"This is the builder's closest contact with the customer, short of personal contact. The man who reads classified ads is looking for specific information. Yet it's the most misused of all media.

"I sometimes think builders are more intent on impressing competition with their tricky classified ads than they are in getting prospective buyers."

He advised: The reader wants facts about the house. Don't try to sell every reader with an ad. Know what market you're aiming for — and appeal to it.

Speakers had some pertinent points about that most important ingredient needed for sales — design.

Some of them:

- **Confusion between mere "difference" and genuine design** defeats the efforts of many builders in their quest for buyers.
- **Design is the basic stuff of a house** — that which makes it practical, convenient and pleasing in the long as well as short term.

It's not merely a different color of paint, or a floor plan cut up for the sake of being unusual.

Advised: Have one dominating feature to a home — a single basic idea or style.

- **Don't mix architectural styles** in the hope of pleasing everyone.
- **Planning must be done inside and out.**

A good interior plan can produce a poor exterior.

By the same token: scale must be considered — scale of windows, porch posts, etc. — for they reinforce or destroy total design impression.

"Emphasis will be on visual design," Teron declared.

"The builder can capitalize on this," he said: "Plan for your market — and here the small builder has the advantage over the large firm which must build an entire subdivision for a single market.

"The smaller builder can know his customers personally, while the large builder must rely on surveys and market research."

House grouping is at least as important as individual house design. A fine house design isn't much good if there are 50 of the same model all in a row.

But the alternative to monotony must not be chaos. The alternative to 50 identical homes in a row is not mere alteration of bungalows, two-stories and split-levels.

Good advice:

If a builder can't think in terms of visual design concepts, he should hire a designer.

Here are some popular misconceptions, demolished by the panel, about which areas of a house appeal to men and women:

- **Men are more interested in kitchen appliances than women.** They're also concerned with lighting whereas the wives are indifferent.
- **Men and women share** equal interest in the bathroom while men are more interested in the bedrooms.
- **Women are most concerned** with the exterior and interior design of the house — the floor plan and traffic pattern.

Another aspect of their industry at which builders are taking a long, hard look — better business management.

Discussing better administrative practices, A. Kelly, Hamilton house builder, emphasized the need of order, pointing out that the high incidence of business failures is due almost entirely to poor management.

Other comments:

Kenneth R. Lavery, **Payne-Ross Ltd.**, management consulting firm:

Before incorporating, the builder and any businessman should be able to answer these questions:

- Is the business to be dissolved on retirement?
- Is there an outside income?
- What's the profit fluctuation?
- Is the business suffering a tax loss?
- How much depreciable equipment is there?

He advocated: Allowing profits to accumulate and planning the distribution of an estate long before death.

Incorporation simplifies passing the business along.

One way: sell the business to a corporation made up of heirs. Then, should depreciable property be transferred, the successor would obtain the market value, not the depreciated cost.

Again, for the small house-builder and businessman: Keep yearly net profit under $25,000. If it's higher, take the excess out in salaries.

A. Walling Ruby, **Burns Bros. & Denton:** With accumulated money, the prudent investor applies diversity.

Prerequisites of a successful investor:

Flexibility and liquidity.
Preservation of capital.
Safety of income.
Maximum present income.
Capital appreciation.
Maximum profit.

Shift from one investment to another, Ruby suggested. The investor has the best chance of success if he remains flexible.

Short-cuts in cutting taxable income as suggested by Charles Simmons, succession duties consultant:

Life insurance is the easiest method and noted that an insurance policy paid by the wife, on the husband, is tax exempt.

Under federal law, a home registered under the wife's name, and lived in for more than three years, is also tax exempt after death.

Land development problems was another major topic of discussion.

H. P. Hyatt, Toronto builder, claimed that the small builder can still assemble and service his own land for building.

He shouldn't be discouraged from undertaking land assembly and development suitable for his own building requirements.

All he needs is determination and the small builder can be independent of subdividers.

Hyatt offered himself as an example.

He builds up to 30 homes a year, is a successful one-man operation, still finds time to search out small parcels of land and go through all the government channels necessary to prepare the land for building.

If the small builder looks for the tracts which are too small — and therefore too expensive — for the larger developers to use, he can get them for small cash outlays and favorable interest on the remainder of the price.

A good advantage: These small parcels are usually closer to the centre of a city, consequently more desirable from the house buyer's viewpoint.

If he doesn't want to go it alone, Hyatt said, the builder can accomplish the same purpose with one or more carefully screened partners.

Other suggestions:

Graham Lount, large land developer in **Winnipeg:**

Average builder isn't equipped to develop land. The builder who does must be a subdivision planner to obtain maximum lot frontage from his acreage. He must be prepared for the great complexity and difficulty of the business.

A. M. Usselman, Calgary, describing the formation of a co-operative land assembly among members of the Calgary Housebuilders Association, suggested this was an opportunity for smaller builders to carry out development they could not carry out as individuals.

The Calgary co-op, he said is one of the most successful in Canada. Credit for this was largely due to care with which the shareholders' agreement was written and to the service of an expert manager.

Eugene Chalifour, Quebec City, said Quebec has never had federal-provincial land assembly schemes but it may come.

Most economical development of land takes place under private enterprise rather than those of government, he claimed.

Cost of services should be amortized rather than put onto the cost of the home lots.

Experts discussing the tough mortgage outlook problem agreed only that there was no easy solution.

Professor J. V. Poapst, Institute of Business Administration, University of Toronto, laid responsibility for mortgage shortages and industry instability on the public, declaring that the public doesn't like interest rate increases in any field for any reason.

Poapst questioned whether rate increases are, in the long run, not less harmful to the public than are the hidden but enormous costs of industry instability.

These costs as he sees them:

- **Hardship to labor and manufacturers.** Home building skills and materials aren't easily transferred to other types of construction.
- **Higher prices to consumers.** To protect themselves against months of inactivity, builders increase profit margin.
- **Poor industry planning.** Established builders can't plan with any certainty for more than a few months at a time, with resulting inefficiency and higher costs. Boom times for housing attract itinerant builders of questionable competence with resulting harm to the industry and public.
- **No development of true labor saving devices** — remarkable in such a large industry. But they would represent fixed costs which are too expensive if they're to be idle for months at a time.

This, in turn, is another excuse for continuing the instability, for the government need not worry about idling of expensive fixed assets as it must with other industries.

Research House Asphalt Floored

The Research House, Mark III, is the latest fruit of the National House Builders Association research committee's labors, now going into their fourth year.

One of the most startling innovations will be use of an asphalt slab on crushed stone as the floor. Asphalt tile could be installed directly on the slab.

Baseboard electric heating will be used.

Three-ply gypsum board, tongue-and-grooved in four-foot widths with special metal runners on ceiling and floor, will compose the interior nonbearing partitions. This eliminates lumber framing for the partitions.

Gypsum-sheet ceiling board will be installed directly on truss rafters, eliminating ceiling joists conventionally used.

Plastic piping will be used throughout.

Under the chairmanship of William M. McCance, Sarnia builder, the work of NHBA's research committee has ventured into new areas. When the committee was formed the main concern was liaison with CMHC over NHA housing standards.

Today, the NHBA, through the committee, is carrying out the only comprehensive, practical housing research program in Canada.

Purpose of the program is not to produce a dwelling which will immediately and magically eliminate the low-cost housing problem. This is patently impossible.

The aim is to use conventional materials in unconventional ways; to uncover the need for new materials, develop them with the co-operation of manufacturers (which has been readily forthcoming), and test them in the field.

An overriding concern is that traditional methods and performance requirements not be taken at face value, but examined for genuine utility.

During the past six months, two steps were taken by the committee which will greatly facilitate its work:

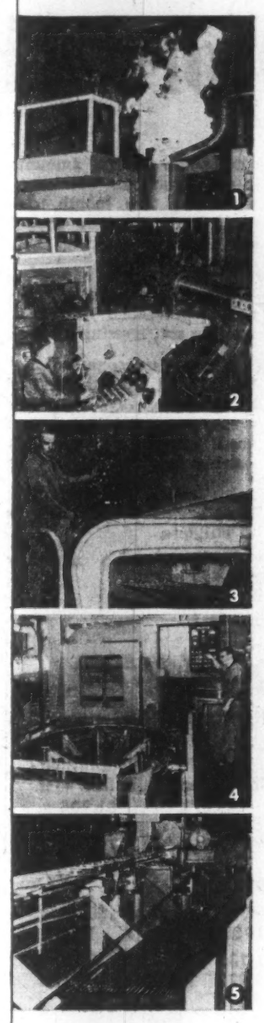
Engagement of Samuel A. Gitterman as technical director.

Negotiation with the federal government of a grant under the National Housing Act for research purposes.

Mr. Gitterman, Ottawa architect, had worked for several years as CMHC's representative with the committee.

It is expected that the grant negotiations will be completed within a few months.

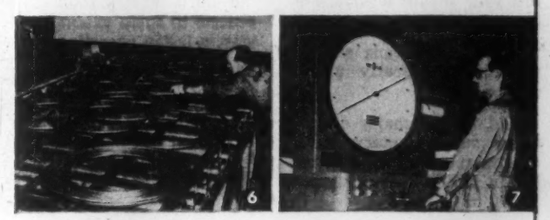
You can count on WOLVERINE TUBE



A PICTURE OF TUBE PERFORMANCE

WOLVERINE

TUBEmanship in ACTION



The subjects illustrated here are representative of the specialized equipment and techniques used by Wolverine Tube to produce copper and copper alloy tubing in its new plant at London, Ontario.

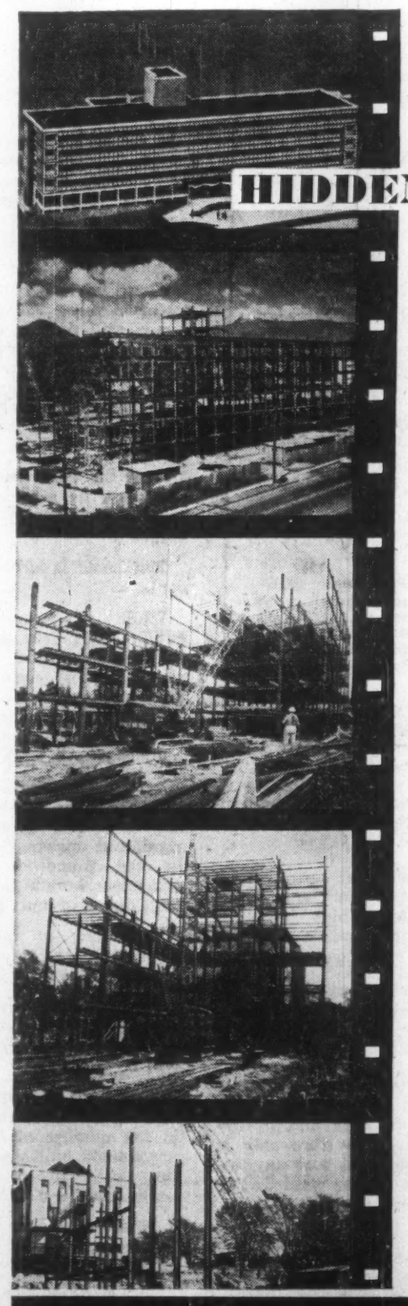
These are but two of the many things summed up in the word TUBEMANSHIP which Wolverine uses to describe its manufacturing philosophy. Tubemanship also stands for Wolverine's many years of metal-working experience, the know-how of its engineers, its belief in continuous research and the thoroughness of its statistical quality control programme.

Wolverine tubular products are available in a wide range of sizes and types for use in plumbing, refrigeration, heating, processing and general metalworking applications. Next time you order, try Wolverine—get tubing produced the TUBEMANSHIP way. Write, too, for our General Products Catalogue. Dept. AA-2.

WOLVERINE TUBE

DIVISION OF CALUMET & HECLA OF CANADA LIMITED
LONDON, CANADA

1. Casting copper billets 2. Extruding tube with a force of 6,000,000 pounds 3. Drawing five tubes at a time 4. Draw block in operation 5. Automatic tube finishing machine 6. Controlled atmosphere tube annealing 7. Tensile testing copper tube up to 55,000 psi.



HIDDEN BONUS WITH STEEL

benefits on this job were:

- Savings of up to 30% in bids for electrical and mechanical sub-trades.
- Unobstructed longitudinal runs of duct work and piping.
- A minimum of 136 feet of additional floor space per storey.
- Reduction of almost 40% in dead weight.
- Early occupancy.

what did this mean in economy?

The general contract was over a million dollars less because of the steel work design and use of steel rather than other materials on this Lions' Gate Hospital* in North Vancouver. Shouldn't you plan to build with steel?

*ARCHITECT: Underwood, McKinley and Cameron, Vancouver
*CONSULTING ENGINEERS: F. W. Urry
R. C. Clough Engineering Ltd., Vancouver

Structural Steel is completely engineered for each project

CANADIAN INSTITUTE OF STEEL CONSTRUCTION INC.
388 YONGE ST., TORONTO 1, ONTARIO

B. C. Red Cedar Shingles Reach For Middle Market

British Columbia's red cedar shingle industry is going after big sales in the medium-price home field and in its traditional market of higher-priced custom built homes.

Despite rising production costs, increased competition from imitation shingles, and occasional labor troubles, the red cedar shingle industry has increased its domestic markets and maintained a large export market.

This has been achieved through a tightly-knit trade association, strict quality control of its products and aggressive advertising and field work.

Gross value to the British Columbia economy of red cedar shingle exports in 1958 exceeded $14 million.

Approximately 85% of total production is exported. The largest market is the U. S., to where over 1.3 million squares were shipped in 1958 — enough shingles to roof about 100,000 homes of average size.

Shipments of red cedar shingles to the U. K. appear to be increasing and, during 1958, shingles were shipped to 15 other overseas destinations.

While domestic sales volume has shown a small annual decrease for a number of years, 1958 was notable for an increase of 10% over 1957.

This trend was reflected again during the first six month of 1959 when shipments to Canadian markets showed a gain of 10% over those for the first six months of 1958.

Handsplit shakes also showed a noteworthy increase.

However, the long strike which started in early July throughout the west coast lumber industry will undoubtedly affect total shipments for 1959. This means that gains early in the year will be offset by decreases in shipments during the last six months.

Both the export and domestic markets look promising for 1960, despite the "tight money" situation in Canada.

It is possible that tight money may work to the benefit of the industry.

If, as is expected, fewer homes are built, mortgage companies and home buyers may be more selective and look for a more attractive appearance and higher quality in the homes which are built.

This could well result in a greater use of cedar shingles and shakes during 1960.

Increases in shipments to all regions are expected.

The four Western provinces have for several years shown a marked partiality for red cedar shingle or shake roofs and an increasing interest in the use of shingles and grooved shakes for sidewall use.

There has been noted, too, a rising interest in red cedar shingle and shake products in Canada's second biggest market area—Quebec.

Another encouraging factor is the number of builders of pre-fabricated and packaged-homes who are using red cedar shingle and shake products or, at least, offering them as an alternative.

Although red cedar shingles and handsplit shakes are most often thought of as superior roofing materials for private homes they are now becoming a familiar sight in many departments of the light construction field.

Hotels, motels, club houses, public buildings, park buildings and even gas stations and firehalls are some of the many buildings constructed during the past few years which have favored roofs and/or sidewalls of red cedar shingles or shakes.

It is in the field of church architecture that these products have provided their most eyecatching appeal, and not only in British Columbia where almost every new church is so roofed (and where many of the older churches have been reroofed with cedar shingles after the original shingle roof had given sound service for around 50 yrs or more).

The trend is rapidly spreading eastward and during 1959 new churches with red cedar roofs have been observed in five other provinces.

For some years the main market for top quality red cedar shingles and shakes has been the custom-built, as opposed to the project built, home. This market is expanding.

The economy grades of shingles, those which cannot qualify for the No. 1 Certigrade label because of minor faults in the upper, concealed areas of the shingles, are mostly marketed in rural areas where shingled roofs and walls still predominate in many parts of the country. They give excellent service.

Probably the biggest problem facing the industry during 1960 is that of getting a larger proportion of the project home market.

During 1958 and 1959 several prominent, volume building contractors used either red cedar shingles or handsplit shakes, or a combination of both.

The method whereby front-facing roof areas are roofed with handsplit shakes and rear slopes are roofed with economy grade shingles (a similar technique to that of using top quality brick or stone for the front facade of a house and a lower grade, or a different material, for the sides and rear walls) has been well accepted by a number of builders in B.C., Alberta and California.

It could be the answer to the good project builder's desire to offer a home with a custom built look at project prices.

By housing standards authority, the economy grades of red cedar shingles are the equivalent of most kinds of permitted types of substitute materials. They compare favorably in cost and are equally durable.

The No. 1 grades of red cedar shingles, and handsplit cedar shakes, are more expensive to buy and apply than imitation products.

It is felt the project home market in Canada can absorb many more economy grade cedar shingles than it does at present.

One of the industry's major activities in 1960 will be to persuade project builders, both large and small, to include designs featuring red cedar shingle and shake products.

The Red Cedar Shingle Bureau, Vancouver, the trade association of the industry, is promoting red cedar shingle markets in North America and overseas.

More than 40 mills are members of the bureau in British Columbia.

They include:

British Columbia Forest Products Ltd. (Hammond Division).

Canadian Collieries Resources Ltd., (Flavelle Cedar Division).

Canadian Forest Products Ltd. (Huntting - Merritt Shingle Division).

Canadian Western Lumber Co.

MacMillan, Bloedel & Powell River Ltd.

Rayonier Canada Ltd. (Totem Shingle Division).

Acme Shingle & Lumber Co.

Horne Bros. Shingle Co.

North Shore Shingle Co.

Watson Cedar Products Ltd.

Mills are located in the lower mainland area of B.C., along the Fraser River, on Vancouver Island and, more recently, in the interior of B.C.

An outstanding example of service the Red Cedar Shingle Bureau has rendered to its members, and to the building industry generally, is the standard grading of shingles.

It was not until the present Bureau, organized in 1926, had functioned for several years, that grading standards were established. All shingles as now produced by member mills are graded under the authority of the U. S. National Bureau of Standards, and in Canada the authority is the Canadian Standards Association.

The current Canadian specification, CSA-0118-1953, has recently been revised and a new section added to cover handsplit red cedar shakes. When accepted by Canadian Standards Association, the new specification will be widely circulated to architects, and others, across the country.

The beginnings of the industry illuminate a sidelight of early Canadian history for, long before Columbus discovered America, the Indian tribes of the Pacific Northwest were using the almost indestructible wood of the Western red cedar to roof their lodges, to build their canoes and their colorful totem poles.

The white man learned from the Indians, and the first cabins built in what is now Vancouver, and along the banks of the Fraser River, more than a century ago, were roofed with handsplit shakes roughly riven from the wood of the giant red cedar trees growing there in profusion.

With the growth of settlements it was not too long before a machine was invented to cut red cedar shingles with precision, and in quantity.

Many of these early markets are still heavy users of red cedar shingles notwithstanding the many substitutes now available.

In the Maritimes and New England a good proportion of the homes, schools and churches have red cedar shingle roofs and/or sidewalls because it has been found, through the years, that buildings so protected are warmer in the raw cold of the Atlantic.

Right across the prairies of Canada and the northern U. S., grain elevators, the "prairie sentinels" of this vast farmland, and farm buildings of every type are roofed with red cedar shingles because they have been found, through experience, to withstand equally well the rigors of raging winds, damaging hailstorms and the heat of summer.

ROOF DECK needn't be solid for red cedar shingles or handsplit shake roof, reducing labor and material costs.

Thumbnail Sketch Of Average Buyer

Here's a picture of the average Canadian who applies for a National Housing Act loan:

He has an income of $5,735 a year.

His home cost him $14,612.

His down payment was $3,155.

This was at the end of the third quarter of 1959 as estimated by Central Mortgage & Housing Corp.

Some more data on Canada's NHA home buyers:

In 1956, 51% of houses sold under NHA were in the $12,000 to $15,999 bracket.

Last fall, when latest estimates were available, percentage was 60%.

NHA homes costing $16,000 and over in 1956 totaled 17.1% of total for year while latest figure is 27.8%.

While 16.2% of NHA-financed homes in 1956 were in the $11,000 to $11,999 bracket, only 6.3% fell into this class at last estimate.

Average cost of construction per square foot on NHA houses was $10.22 in 1956. This rose to $10.83 by the third quarter of 1959.

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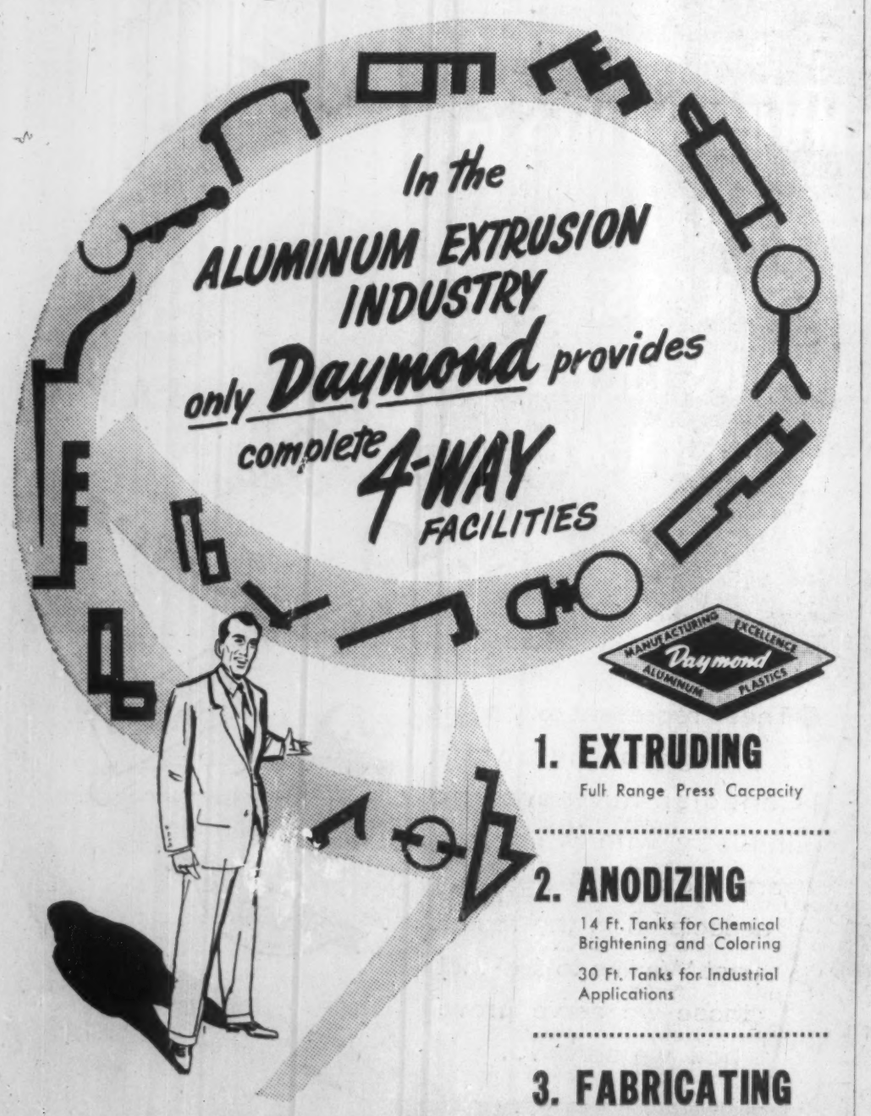

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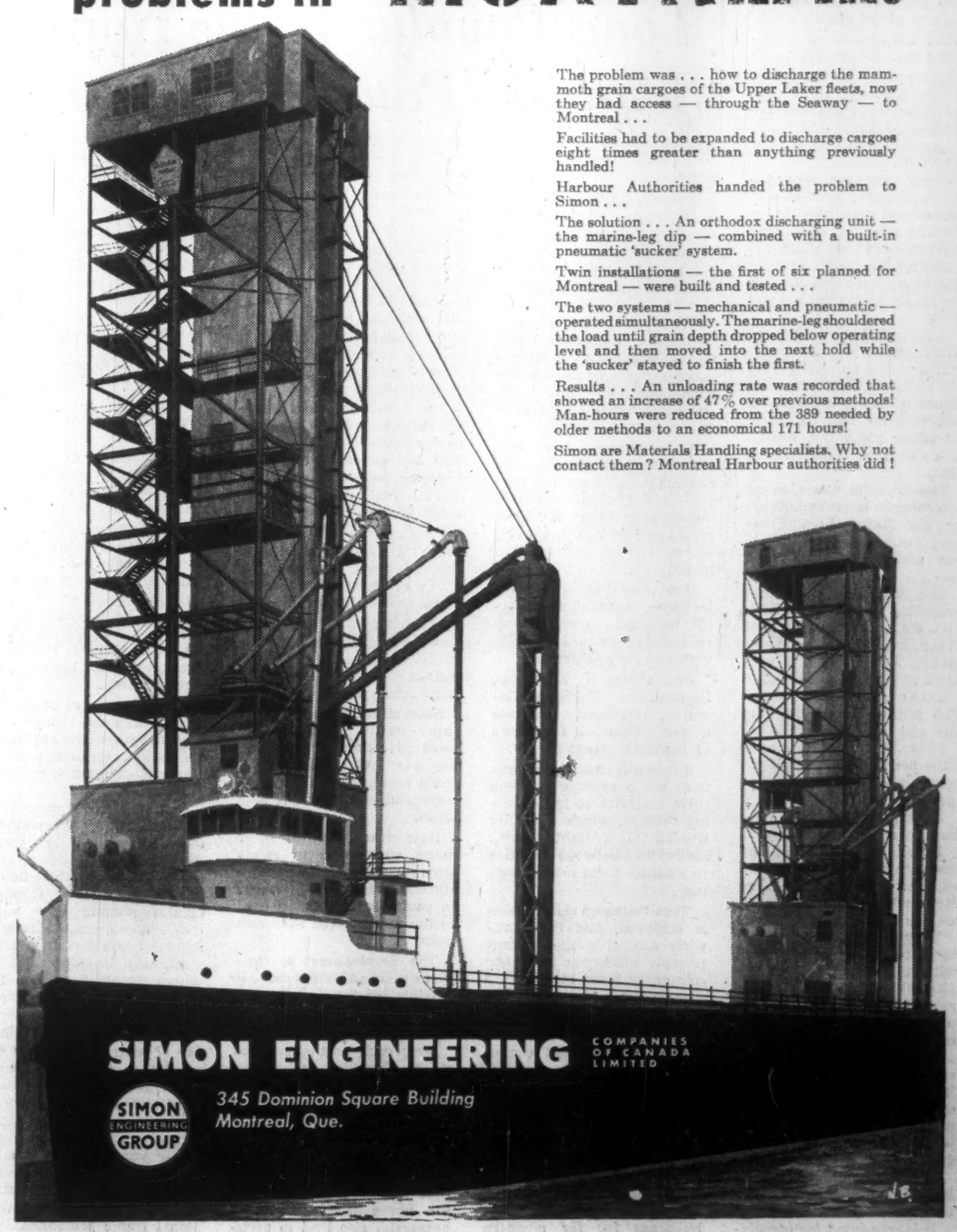

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How Cities Are Growing

	Starts			Completions			Under Construction as at Dec. 31		
	1959(1)	1958	1957	1959(1)	1958	1957	1959(1)	1958	1957
METRO AREAS:									
Calgary	5,298	5,655	3,425	5,392	4,923	2,919	2,622	2,749	2,011
Edmonton	4,004	5,805	3,320	4,995	4,702	2,957	2,601	3,723	2,662
Halifax	1,509	1,345	842	1,344	1,108	977	972	789	548
Hamilton	3,784	4,092	3,264	3,378	3,649	3,399	2,441	2,020	1,586
London	2,456	2,544	1,269	2,150	2,039	1,163	1,542	1,246	719
Montreal	20,939	26,198	19,122	22,641	22,979	17,898	11,084	12,855	10,060
Ottawa-Hull	5,391	5,732	3,824	5,511	4,983	3,992	2,644	2,784	2,012
Quebec	2,280	2,367	1,287	2,389	1,897	1,570	984	1,020	559
Saint John	329	361	255	316	301	318	165	163	103
St. John's	271	503	206	338	288	338	342	412	199
Toronto	18,774	24,301	17,113	18,364	23,125	14,719	12,948	13,015	11,885
Vancouver	9,510	12,299	7,539	11,542	10,059	7,663	4,781	6,830	4,613
Victoria	1,249	1,508	1,053	1,508	1,173	959	781	1,017	650
Windsor	723	1,122	1,037	1,044	1,012	1,381	280	623	524
Winnipeg	5,332	4,422	2,092	4,186	3,673	2,737	3,346	2,254	1,133
MAJOR CITIES:									
Brantford	217	169	154	193	126	170	131	180	137
Chicoutimi	216	269	140	210	230	82	101	97	76
Ft. William-Pt. Arthur	784	1,068	633	937	791	555	335	585	322
Guelph	45	510	211	39	321	154	22	334	143
Kingston	148	359	222	172	224	269	72	242	106
Kitchener	961	838	561	994	655	587	476	525	342
Moncton	430	264	172	297	161	286	302	171	74
Niagara Falls	3	11	1	2	14	21	2	1	4
Oshawa	491	908	650	664	735	560	226	434	269
Peterborough	204	378	351	282	373	284	75	154	155
Regina	1,574	1,156	1,035	1,379	1,142	1,073	814	558	565
St. Catharines	205	187	199	189	225	170	72	58	97
Sarnia	619	444	385	496	450	286	292	172	178
Shawinigan Falls	120	109	69	1,325	1,349	1,103	813	528	389
Saskatoon	1,629	1,481	1,080	324	248	293	194	176	99
Sault Ste. Marie	373	327	268	113	115	54	22	30	40
Sherbrooke	516	299	195	331	221	191	321	139	61
Sudbury	109	133	139	101	141	161	56	50	60
Sydney	146	89	118	99	119	62	163	116	146
Timmins	121	51	29	51	33	24	97	29	14
Trois-Rivieres	283	291	246	247	281	231	145	98	94
Other Centres	14,950	14,100	12,369	14,514	13,974	11,389	7,621	6,903	6,873
TOTAL	105,993	121,695	84,875	108,057	107,839	80,995	59,885	63,080	49,508

(1) preliminary
Source: CMHC

Build Nickel Mining Town 400 miles North of Winnipeg

This year a major shift in the population of Thompson in northern Manitoba will get under way.

As the giant mining, milling, and refining plants being built by **International Nickel Co. of Canada** are completed the 2,300 construction employees will leave temporary living quarters.

They will be replaced over the next few years by over 7,000 permanent residents of this new nickel mining town.

And the population is expected to double by 1975.

To get ready for the influx of new residents, residential and commercial construction is being pushed.

Already schools have been completed.

Under way are shopping centres, houses, hospital and recreational facilities in a townsite that represents the latest ideas in town planning.

The town occupies a 3,000-acre heavily wooded plot on the banks of the Burntwood River.

It is about 400 mi. north of Winnipeg.

There are no roads into the town yet although construction has started on a link with the Pas, the nearest major population centre. It is slated for completion in 1963.

The townsite was planned according to latest techniques by the Metropolitan Planning Commission of Winnipeg under agreement with Inco.

The land is fully serviced including storm and sanitary sewers, water treatment plant and domestic water supply system, and a network of roads and sidewalks.

INCO planned to spend $8.5 million to prepare the site and provide services.

Now that these services have been nearly completed, construction of houses is being rushed.

A score of private contractors are busy in the town.

Initial 200 homes in the townsite are nearly completed. There are building sites for further 1,300 houses as well as apartments.

They are building two and three-bedroom homes that will sell at prices between $9,860 and $13,700. Down payments as low as $520 are planned, with most of financing coming under NHA.

A 12-room elementary school has been in use since last September. Plans now call for additional two elementary and one high school to be built by the end of 1961.

A fully equipped 30-bed hospital is under construction.

It is scheduled for completion late this spring.

It has been designed for expansion to 64 beds and will include operating rooms and maternity ward.

The sewage treatment plant is nearing completion at an estimated cost of $450,000.

A water purification plant is also nearly completed.

It has been designed for easy expansion and pumps water to the consumers through a water line varying from 4 in. to 24 in. in diameter.

About 38,243 ft. of water main has been laid, along with 40,000 ft. of storm sewer and 43,000 ft. of sanitary sewer completing about 50% of the lines to be installed.

One feature of the water plant:

During the winter months the water has to be heated and recirculated to avoid freezing. This is expected to be eliminated when demand by the population is stepped up.

Long Popular in the North Sandwich Panels Move South

There's a growing potential for structural sandwich panels.

Housing groups and the large house manufacturers are showing greater interest in panel houses.

Aircraft studies in sandwich construction (beginning with the famous British Mosquito bomber) have, since World War II, led to developments and tests of whole house systems in light sandwich panels by many U. S. and some Canadian companies.

Early problems were met in failures of bonding and in generally high costs, but several well-proven sandwich houses over 12 yr. old have been reported as being lower in cost than conventional housing.

Now several large companies claim, that with new plastic materials, much lower potential costs are possible with volume production.

Here's how R. E. Platts, Division of Building Research, National Research Council, described the future of sandwich panels for **FP**:

Structural sandwich systems use a relatively strong sheet material as load-bearing "skins", which are fully bonded to a light "core", sandwiched between the skins to stabilize them under loading.

True "stressed skin" action is achieved, and the sandwich can give the highest possible efficiency in either column or beam action.

The weight and number of materials in a house can be reduced to half or less, so that much more efficient use of resources is clearly possible.

Finished load-bearing house walls can be less than 2 in. thick, and roof panels only 4 in. thick can readily span 12 ft.

The great need in Canada for lightweight, low bulk, adequately insulated panel buildings for far northern use has provided the incentive for the development of engineered sandwich systems for the North. These northern sandwich units are still high in cost and have not been used in southern Canadian housing.

On the other hand, manufacturers in the U. S. believe that sandwich house systems are promising now for all housing uses and some are already beginning production of sandwich components.

The satisfactory performance of the sandwich depends on the suitability of the skins, core and adhesive under all expected loads and environments. Failure in any one means failure of the whole.

Developments in strong sheet materials over the past three decades offer a wide choice of structural skins for house sandwich panels.

In rough order of ascending costs, these may be plywoods, hardboards, particle boards, metals, paper-plastics and reinforced plastics.

Successful core materials in paper-plastic "honeycombs" were first developed during the war and until recently could be considered the most successful sandwich core material.

Now foam plastics offer many advantages in sandwich production, and polystyrenes and polyurethanes in particular are being used in the more recent sandwich units.

The development of synthetic resin adhesives made it possible for the first time, it is claimed, to make durable sandwich panels.

Now such synthetic resins as the phenolics, resorcinols, ureas, neoprene-phenolics and others are used in all structural sandwich components.

Thin, light sandwich panels offer savings in transportation and in usable space in the house itself but these properties also lead to problems in bowing, fire resistance, and sound transmission. A great deal of research is being done on these problems by larger developers.

Bowing is largely understood and usually can be readily solved. Appreciable differential expansion of the skins must be prevented by the choice of the skin and final finish to prevent movement through moisture absorption or high temperatures.

Sandwiches with organic cores will probably always have relatively poor fire resistance, but they can be suitable for most housing uses and in some cases for curtain walls in larger buildings.

Their light weight renders it impracticable to obtain sound protection. (against sound transmission through the component) so that in housing uses, sound must be further controlled through the use of resilient floorings, arrangement of closets and other methods.

Other factors of sandwich performance can also be critical and successful sandwich design demands careful planning and attention to production details.

Detailing the whole assembly, particularly the jointing technique, must be given special care, and over-all cost reductions in the whole house are only possible through careful planning for windows, doors, partitions and service elements (the latter preferably surface-mounted where possible) so that the panels may be manufactured on a standard modular basis.

The reduction in the number of materials and the use of large sheets in panel manufacture means that sandwich construction offers reduced shop labor and potentially lower costs to the house manufacturer — at the expense of much more critical shop control and testing requirements than in conventional frame prefabrication.

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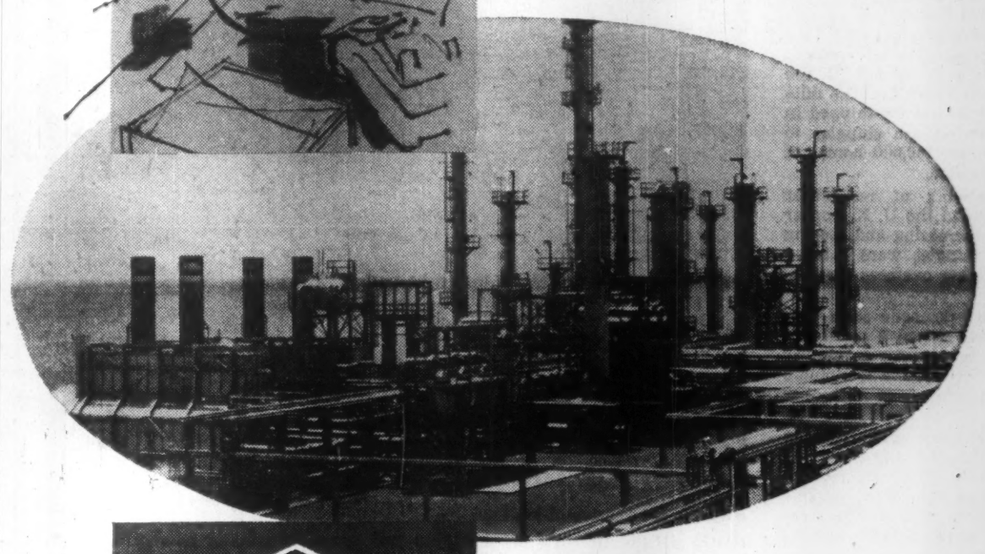

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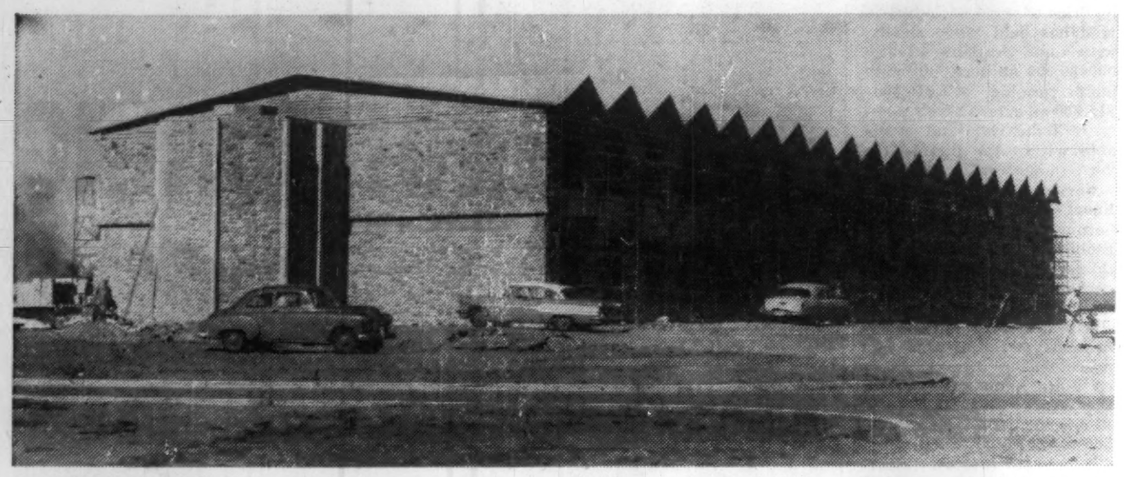


A STRIKING EXAMPLE of use of precast concrete in classroom wing of arts building, University of Saskatchewan.

Precast Floor, Wall Panels Trim Costs for N.S. Builder

By ROY K. COOKE

SYDNEY, N.S. — Here's a way to build attractive homes at a lower cost.

Insul-Lite Builders Ltd., of Sydney, Cape Breton is using precast concrete floor and wall panels.

The company sells 28 by 40 ft. homes including lot, wiring, plumbing and warm air oil furnace for $14,000. Insul-Lite claim this is $2,500 cheaper than the price of conventional wooden homes.

Company has pioneered this type of construction on a mass production basis in Canada.

In 1954, the first year, the company built ten homes in Sydney. Since then it has sold 300 units, 90 in 1959.

It has plans for another 100 in 1960.

Secret is the company's use of expanded slag as the aggregate in cement instead of sand or gravel.

Slag is a byproduct of **Dosco's** blast furnaces and there is almost an unlimited quantity. This is one of the few uses discovered for it.

Slag wall panels are 8 ft. by 18 in. and weigh 260 lb. as against 440 lb. for sand and gravel concretes. Floor panels are 9 ft. by 18 in. Both are reinforced with steel rods.

Half panels used for door and window sections.

Increasing the size of any building is done in multiples of 18 in.

Other advantages claimed are that it can be nailed, has excellent thermal insulation, possesses sound absorbing features, requires less maintenance and is fire resistant.

Most homes have been built in the Sydney area but, in 1959, Insul-Lite began a 26-unit subdivision at Woodlawn Heights, a Dartmouth suburb.

They have also built 20 units at Corner Brook, Newfoundland.

At Homestead Park in Sydney the company has almost completed a 54-unit duplex development. These are six room, two story flats with no basement and contain 1,250 sq. ft. of living area.

They are sold as single or double units but any number of units can be added for row housing.

Cost of single units with lot and landscaping is $11,400.

Down payment is $1,000 with a monthly payment of $68.

Insul-Lite designed these originally as low cost units for service families. They are proving, say the company, as a good invesment for private income.

Slag has been used considerably in Europe both with precast and poured on the job with forms. Pouring on the job is popular because of the lower cost of labor on form work as compared with North America.

Coventry, the U.K. cathedral city, "coventrated" by Nazi bombs, was almost completely rebuilt with slag and concrete wall panels after the war.

Greatest use in Canada, previously has been concrete block production.

In the last four years, Insul-Lite has built 75% of all CMHC financed homes in Sydney.

Company employs about 125 employees at its peak in the summer. Panel construction enables crews to work through out the winter.

Advertising helped to sell homes but the best promotion was holding open house.

President of the company is Abe Zelikovitz of Sydney, who also heads **Scotia Distributors Ltd.**, and **Associated Sales & Services Ltd.**; an automotive supply firm and footwear wholesaler.

Concrete blocks provide a speedy erection of any wall. Insul-Lite merely carry this scheme a step farther by using full height wall panels.

Cement basements are poured in the regular way with forms. Floor panels are laid on 4 in. steel railway beams with a 1 in. of cement to level.

Wall panels are placed on end to form the exterior walls and grouted with a mortar joint.

After insulating and gyprocing, plaster or dry wall finish is used. The outside wall receives a ⅜ in. base coat of stucco which is usually painted.

All panels are manufactured to rigid specifications by **L. E. Shaw Ltd.**, who have masonry products plants in Sydney and Halifax.

Precast Beats Winter Builder Meets Deadline

The use of precast concrete in the construction industry has moved into education.

One striking example is the new two-story classroom wing of the Arts Building at the University of Saskatchewan.

Work began on this wing in October, 1958, with the construction schedule requiring the wing be ready for occupation by September, 1959.

This meant that work would have to be carried on during the winter months when extremely low temperatures plus high winds are frequent in Saskatchewan.

The Toronto architects, **Shore & Moffat,** found that precast concrete was the answer.

The use of precast concrete facilitated speedy construction, as the rigid structure of the cast-in-place corridor was constructed simultaneously to the preparation of the precast units.

This method also proved economical as local labor and materials could be employed.

The only specialists required were one or two supervisors experienced in precast concrete work.

This use of local labor also served another purpose, as it enabled the Saskatchewan Provincial Government to help provide a source of employment for laborers during a time when normally employment of this type is not always available.

The most outstanding feature of the classroom wing to the casual viewer is the "pleated" roof.

Shore & Moffat evolved this design to sympathize with the Collegiate Gothic silhouette of the other buildings and to locate a harmony and unity between the old and the new.

The roof is made up of 40 individual precast units, 20 on each side of the roof, coming to a point in the middle.

The actual precasting work of these nine-ton roof units, and the columns and spandrels, was carried out in a temporary fabricating shop within 100 ft. of the actual structure.

In the precasting of the roof units two plywood forms were used and re-used for all of the units—another economy factor. Steel reinforcing was built over the plywood forms and covered with concrete.

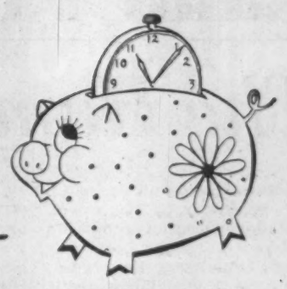
Only 24 hr. after the concrete was poured in place the units were placed outside, covered with polyethylene sheeting and steam cured for an additional 24 hr.

This process took place in the bitter winter months of December and January.

After curing, the finished roof unit was uncovered and stored in a convenient spot near the structure.

The precast roof units were then lifted by mobile cranes into place on the nearly completed building frame which consists of the cast-in-place corridor, precast columns and spandrels, and the precast double-"T" floor slabs which were manufactured in a plant some distance from the site.

Time is money save it with ---



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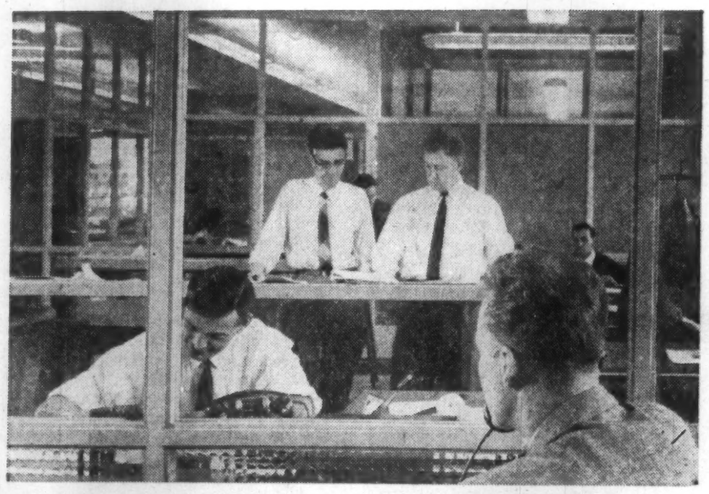

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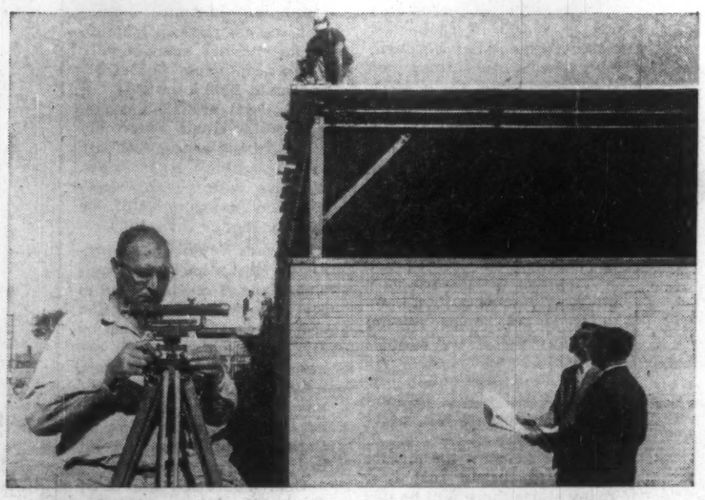

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Land Problems

The Home Owner Pays

Serviced land and its high cost, especially in the residential field, continues to be a problem in major centres across Canada and the arguments as to who should pay, what runs hot and hard between the subdividers and the municipalities.

But, in the final analysis, the home owner still pays.

Here's a provincial roundup of the outlook and its effect on prices:

Newfoundland

St. John's, Newfoundland, is awaiting word from Central Mortgage & Housing for aid in servicing a tract of 500 acres in the city's northern suburbs.

It is planned to provide at least 250 building lots.

Roslyn Realties is developing a new subdivision 1 mi. from the city boundaries for 100 building lots.

Road construction in the region has started but was delayed by weather.

St. John's Housing Corp. is developing 34 lots and will have them ready for spring.

The lots will cost about $3,000 which will make the price range for homes $16,000 to $18,000.

Land values have soared since the city started expanding.

Prince Edward Island

Last year serviced land was hard to come by in Prince Edward Island but indications are that several hundred lots will be available within the next year.

Extensive land development in Wards 5 and 6, resulting from Charlottetown's amalgamation with the former village of Spring Park, are opening up new vistas in the westward expansion of the city.

It has been estimated that 100 building lots 75 ft. by 100 ft. are serviced with water and sewage in the area under development and that possibly 900 more are in line for servicing.

Some owners are reported to be asking up to $1,500 a lot unserviced and indications are that serviced lots will bring from $1,800 to $2,500.

An average house costs between $12,000 and $15,000 to construct and the land approximately $2,000 depending on the location.

Present municipal views are that this development should be carried out entirely at the expense of the city.

In the long run, the city would stand to take in upwards of $200,000 in taxes annually.

Some sections of the development would also be suitable for secondary industry, much needed in the province.

Nova Scotia

Land values have doubled in Halifax in the last 15 years although there has been no appreciable increase in the last two.

Outlook:

More demand for scarce land will bring a fresh rise in prices.

A prime commercial location on downtown Barrington St. recently sold for more than $20 sq. ft. The buyer was interested only in land, but a burned-out building was included in the deal. It had to be demolished.

Two blocks north or south, land with buildings sells for $10 sq. ft.

Still further away on Spring Garden Rd. the price is $5 to $6 sq. ft.

Just after World War II, residential lots could be purchased for prices ranging between $1,000 and $2,000.

Today equivalent lots sell as high as $8,000 in the city peninsula.

High prices have forced land-seekers to move into the fringe areas where serviced or semi-serviced lots sell at $2,000.

Halifax encourages new industry to establish in the "industrial mile" fronting Bedford Basin and on the central exhibition grounds.

Lots are available on these city-owned locations at 85c sq. ft.

The same land in other hands and in the downtown area would bring $4 to $10 sq ft. Services for these lots could be obtained easily through extensions.

Home construction costs on waterfront sites in the city limits run as high as $15,000. Other lots within the city — and today there are few — carry price tags ranging from $4,000 to $10,000.

New Brunswick

Fredericton is the only municipality with a local improvement by-law. It went into force in 1954.

Under it, the sub-divider pays $6.20 per ft. frontage for services and the city absorbs everything up to the cellar wall.

Same principle applies to commercial and industrial sites.

However, the builder or owner would have to pay any extra cost for sprinkler system or change in existing connections from street.

There is a local need for low cost housing and cheaper land.

The city sold a number of lots to a sub-division realtor for $700 each on the understanding that cost of houses and lots would not exceed $10,000.

In another section of the city, the land for an $18,000 dwelling cost $2,500.

Moncton, it is understood, charges $2 per ft. frontage plus a flat $15 fee for opening and connecting the city services from the street to the property line.

Saint John provides the services on an amortization basis.

A sub-divider or individual has to give a guarantee of 10% per year of the cost of the services over a 10-year period.

The same system applies to commercial and industrial building. The cost is added into the cost of the land.

Cost of Services

	*1959	1958	1957
		$ millions	
Tile drains, etc.	18.6	18.1	23.6
Water mains, etc.	80.5	70.0	76.8
Sewage systems, etc.	114.8	92.9	88.1
Pumping stations, water	9.6	8.4	9.2
Water storage tanks	2.7	6.0	2.4
TOTAL	226.2	195.4	200.1

*Preliminary estimates for work done.
Source: DBS.

Quebec

There is less serviced land than ever in Quebec and strong demand is forcing prices steadily upward.

This situation is reflected in a continued rise in the value of well located older properties which are becoming more attractive in the eyes of buyers who want them to renovate.

Average cost of a lot for the typical NHA house has increased from around $500 to more than $2,500 in the last 10 years.

Foreign investment in Quebec real estate will continue at a high level.

So far, such operations have been confined largely to Montreal but there are signs they will spread to other parts of the province, creating tighter serviced land situations in Quebec, the Laurentians and, perhaps, the Eastern Townships.

A tenants' market in the apartment field will provide some alleviation until growth factors catch up with overconstruction of some types of multiple dwellings.

Long-term outlook:

Serviced land values will continue to rise as there is more real estate equity money seeking outlets than there is land offered for sale.

Ontario

A spot check of some Ontario centres shows this picture on land and prices.

• **Toronto:** For the first time in some years, there's been a levelling off in the price of residential serviced land in metro Toronto.

Price averages around $5,500 to $6,000 in Etobicoke, North York and Scarborough, with some exceptions, or about the same as in 1959.

Average home in the metro area will sell around $15,500 to $16,750 this year.

Cost of labor has gone up but plenty of houses are available so prices should hold firm and there may even be a few cuts here and there for astute home buyers.

They can drive hard bargains with some builders anxious to get homes moving but there will be no general cuts across the board.

The main problem in this key area this year is not land but the shortage of mortgage money.

At the moment the picture is obscure as to just how many starts there will be this year. But builders still insist that they could sell all the homes they could build.

Price of serviced industrial land has held fairly steady, with some available at $5,000-$6,000 an acre, but with most running at $10,000-$15,000 an acre. There's plenty of industrial land available within the metro area yet.

Service charges on a per-lineal-foot basis for Scarborough, North York and Etobicoke (which covers such things as residential roads, curbs and gutters, local water mains, local sanitary sewers, storm drainage, house connections, street lighting, and miscellaneous items) showed these jump increases for the years 1953 and 1958: Etobicoke, from $27.25 to $60.40 (121.6%); North York, $31.80 to $67 (110.6%); Scarborough, $55.22 to $74.55 (35%).

There's plenty of land available for apartment building, too, but at the moment, because of tight money, the 1960 outlook is obscure.

• **London:** Serviced land should be approximately $6 to $7 per foot more in 1960 than in 1959, due mainly to more rigid specifications demanded.

There will be problems connected with tying into municipal sewers but these should be corrected by the end of the year.

Price of NHA homes, consequently, will be slightly higher than in 1959.

While mortgage rates may have some effect in slowing sales, over-all picture should show as many completions in 1960 as in 1959 which was a record year.

Industrial outlook is very favorable, with plenty of good, well-developed land ready for use.

• **Lakehead:** Serviced land for new homes in this area is practically nil because the cities can't get funds to service it. Home owners have to pay in cash to get land serviced.

A 60-ft. lot sells for $2,600-$2,900 and services and tying in with trunk sewers is on top of this. Lots have increased in price by $200 to $500 in the past year.

Price of an NHA home in 1959 was in the $11,000-$14,000 range and this year will be up at least 3% because labor costs are going to add $300 to these figures, plus other costs. This includes the land price.

Port Arthur and Fort William aren't prepared to service land for project builders, bring only trunk sewers to the edge of the property.

Plans for opening a large tract of land known as "North of the Neebing River" are still stalled.

Commercial land costs have jumped 60% in the past year because the cities suddenly ran out of such properties.

This applies to properties within three blocks of the best commercial sections of the two cities.

On the fringes, commercial property is selling for $510 a ft. Tearing down old homes is the alternative now.

Industrial land costs are up 10% in the past year. Building costs will be up at least 3% this year.

• **Sarnia:** There seems to be enough serviced land available here for 1960, including a federal provincial land assembly of about 200 lots priced at around $1,150 each, with one half of the cost of services amortized over a period of 15 years.

There's also about 400 privately subdivided lots, fully serviced, selling at prices from $3,000 to $4,800.

Houses built under NHA and under conventional lending are both up around 20% over 1959.

The increase in cost of land and services amounts to around 15% of the total price or 75% of the increase.

Recent revision of local by-laws controlling density of population in multi-family areas makes the construction of apartments economically feasible, reducing land costs to around $800 a unit.

Industrial and commercial land costs remain extremely unsettled and a close estimate isn't possible right now. Building costs in this construction category will be slightly higher than 1959.

• **Niagara Peninsula:** Centring on St Catharines, there's a shortage of serviced land in the area, with the exception of less than 100 lots owned by different builders which are quite widespread in the area.

Outlook is poor with 150 lots available in the spring in Merritton, 100 in St. Catharines and another 100 in Grantham Township.

Cost of serviced land in St. Catharines is around $35 a ft.; Merritton, around $45 a

(Continued on page 79)

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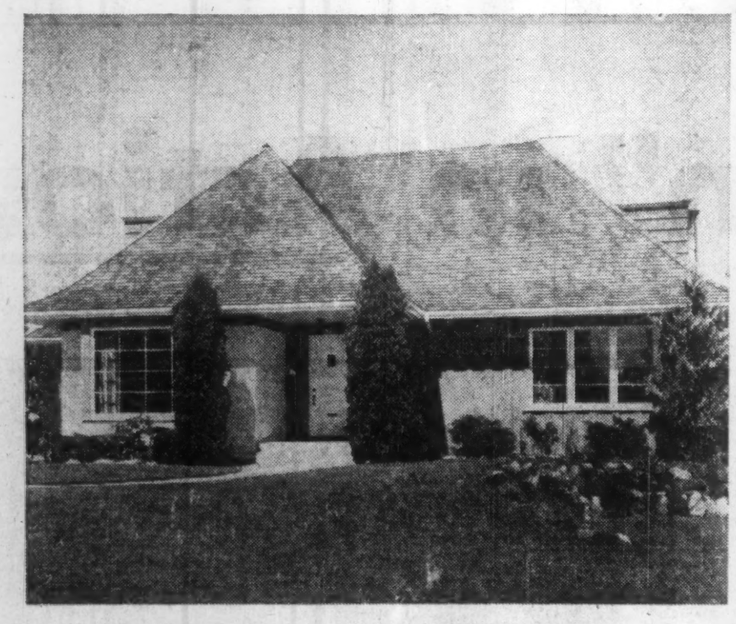

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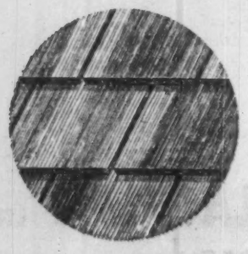

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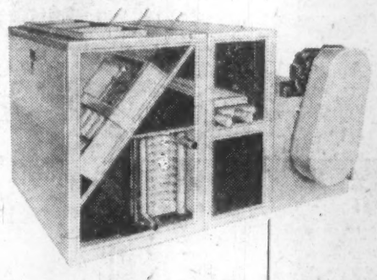

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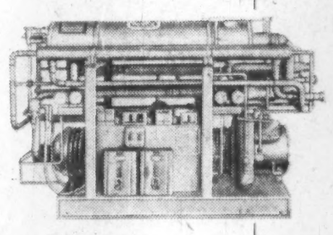

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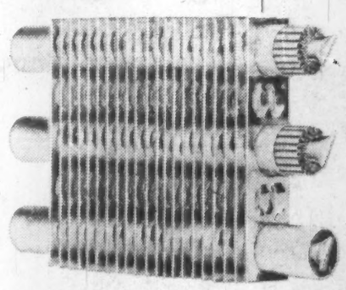

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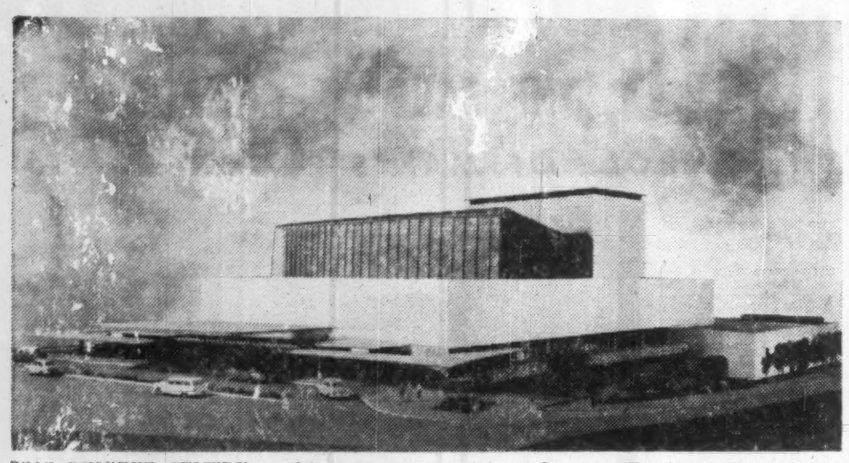


THE O'KEEFE CENTRE, multi-purpose entertainment house, will open in Toronto this fall.

Land Costs Hit Home Owners

(CONTINUED FROM P. 78)

ft.; Grantham Township will jump from $35 to $45 a ft. this year due to change in subdivision agreement.

Cost of NHA homes in 1959 averaged around $10.20 a sq. ft. for a standard home and there will be a slight increase in cost this year.

Custom homes are rising in cost. Apartment outlook is poor.

As for municipal policy on serviced land for homes, it's non-committal until amalgamation takes place and overall planning comes in.

Industrial land is available at nominal prices, both in the Township of Grantham and in the city.

There hasn't been much development in this line here and building has been slow.

• **Oshawa:** Has about 1,800 acres of industrial land available, some 1,640 of which is privately held, with the rest belonging to the city.

Private industrial land sells at around $1,000-$3,500 an acre and city land at around $1,500 an acre.

About 1,800 acres are available for residential development but Oshawa is a little overbuilt in homes and apartments right now which led to a stiff cutback in NHA loans last year. The situation isn't considered serious but a backlog does exist.

Price of serviced residential land works out at around $3,500 a lot.

This year, homes will cost around $14,000-$16,000 but quite a few will be available at $12,000.

• **Hamilton:** Serviced land is mostly on the Mountain, with about 1,000 serviceable lots available within the existing boundaries of the City of Hamilton.

Most of these are owned by a handful of subdividers.

Barton Township, annexed at year's start, will provide pockets of suitable residential land.

Land in Hamilton this year will not be considered any particular problem.

Price per lot is about $4,000 - $5,000, considered high for this area.

Two years ago these lots were only $3,500 and five years ago, only $2,000-$3,000.

Now Hamilton is on subdivision agreements and this has pushed the price up.

In adjacent Burlington, quite a bit of land is available with lots selling at around $4,200 each.

Houses in Hamilton have been selling extremely well.

There's been a significant boom in apartment block building in the past year, with a very substantial number of dwelling units started last year in this class — around 59%; surprising for what has always been considered a city of homes.

Land for these apartment units costs around $1,000 a unit which fits in well to rental structure and has wide appeal for young married couples.

In all of metro Hamilton at Jan. 31, 1960, there were only 154 homes completed and unoccupied against 203 last year and only 48 in the city of Hamilton.

Multiple units (new apartments started in which there has been no occupancy for first time) numbered only 81 at the end of January.

Prices in the city tend to hold or even be a shade lower for homes, due mainly to impact of the 500-lot Buchanan Park federal-provincial assembly which provided fully serviced lots at $2,700 each.

Average price of a home is in the $15,000 - $17,000 bracket.

Industrial land: Nothing available under $10,000 in metro Hamilton and running up to $20,000. This is slightly higher than last year.

Commercial sites for stores in the city proper are very limited.

Manitoba

Greater Winnipeg municipalities are short of serviced land for residential development.

The city itself starts 1960 with not more than 60 lots available for home building.

Two subdivision plans are soon to be approved. Their lots will be advertised for sale.

Even with them not more than 200 lots will be available. They will go to the highest bidder.

In the northwest fringe of the city there are 80 acres reserved for industrial purposes.

Interests are pressing to have it opened for residential building but for the present the council isn't likely to agree.

In suburban municipalities there is plenty of vacant land, most of it without sewer and water facilities. Municipal councils, either unwilling or unable to incur cost of installing them, are leaving it to development companies.

In these cases cost of the land may be 10% of the cost of the average home and in some cases more.

Some serviced land is owned privately and held at prices of $50 ft. and upwards.

The high land cost necessarily increases amount of the down payment and occasionally may make it prohibitive for possible purchasers of moderate means.

Scarcity of serviced land is making it difficult for builders who only build about half a dozen houses in a year.

Unless they can acquire building lots at reasonable prices which under present conditions, is difficult, they are finding it hard to operate.

Saskatchewan

Prepaid serviced land in Saskatchewan has been confined to the cities of Regina and Saskatoon.

In Regina, there are two types of serviced property: that supplied by private developers and that provided by the city.

An example of a serviced lot sold by the city would be 50 ft. in width selling around $800, to which would be added $19.77 a foot for installed services, including storm sewers.

This would bring the value of the lot up to around $2,800.

In cases where the developer is the owner of the property, the city has made a practice of adding $21.18 a ft. for prepaid services, which would include everything.

In some cases where the city developed the property, storm sewers had already been installed and the value added was only $14.77 for other prepaid services.

Regina has had some trouble in areas where there were already scattered privately-owned houses.

It has been found difficult to get these owners to fall in line with a prepaid scheme.

In cases where industries moved into city-owned areas this formula has applied.

Industrial sites are running out, however, and the city has annexed about 800 acres of land as an industrial area.

City council has not yet worked out a formula for prepaid servicing costs for prospective owners.

Regina's three largest industries are located well outside the city limits: **Prairie Pipe Manufacturing Co., Saskatchewan Cement Corp.,** and **Interprovincial Steel Corp.**

Saskatoon has had better experience than Regina with serviced land, because it owned more property entirely vacant in substantial blocks.

Regina has never favored land assembly plans under CMHC as contrasted with Moose Jaw which built 150 houses under the plan with contributions from the three levels of government.

Moose Jaw has also built some low-cost housing by arrangement at the three levels of government.

In Regina a modern family home cannot be acquired for much less than $15,000.

That would mean that a typical serviced lot costing $800, plus prepaid servicing around $1,000 would account for around 9% of the total cost.

Alberta

Serviced land is continuing to play a major role in the building construction industry in Alberta.

Costs vary between urban and rural localities but they still are a big factor in building plans.

Edmonton, which at one time owned thousands of lots which it acquired from non-payment of taxes, now is in danger of running out of serviced lots, according to civic officials.

This is due mainly to the heavy demand for land for housing and industrial purposes.

A prominent realtor said there is a good supply of serviced lots in the general Edmonton metro area. Prices of lots also have been stabilized.

This realtor estimated that on the basis of an average $14,000 house, the cost of a serviced lot, which means the utilities have been installed and local improvements such as paving provided, would average $3,500.

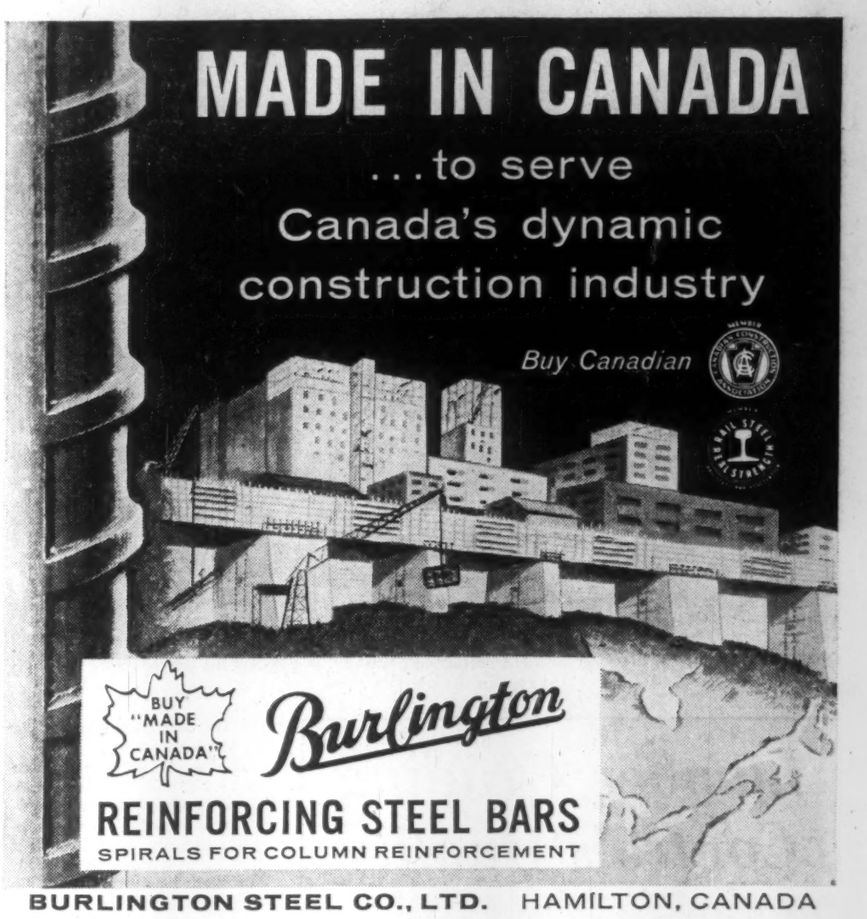
In one modern subdivision, the cost of a serviced lot would range from $4,000 to $5,000 while in another area it would range from $3,000 to $4,000. The cost of a serviced lot would be in addition to the cost of a house.

Some home builders complain of the high cost of land.

They point out that under the National Housing Act, a builder is limited to 1,150 sq. ft. of floor space.

Consequently, he is not disposed to spend $16,000 or $17,000 on a house under such limitations, when in addition he is faced with the

(Continued on page 80)



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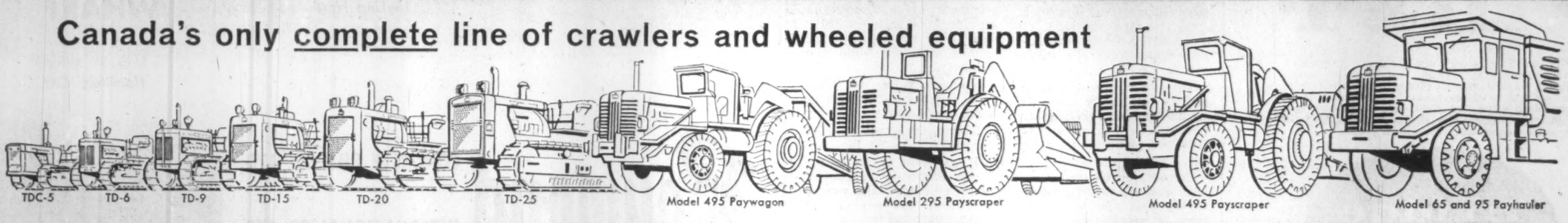

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ONE OF CANADA'S greatest natural resources, timber, is playing an increasingly important role in the construction field.

Lumber Grading Controls Quality

A U. S. Federal Housing Administration announcement recently that all board and framing lumber going into FHA-insured houses had to be grade-marked threw the Canadian lumber industry into temporary turmoil.

It will now prove to be an impetus to closer quality control and uniformity of lumber marking right across Canada.

Action by the Canadian government, succeeded in having the deadline, set by FHA at April 1, 1960, for Canadian lumber to conform, moved back to Sept. 1.

By that time, Canadian lumbermen expect to have the situation under control and this country's substantial exports to the U. S. won't be affected.

Representatives from lumber manufacturers' associations across Canada have met to discuss grade marking.

While Canadian grading authorities for various species have long been functioning, there existed no machinery for grade marking.

Nor was there any recognized Canadian authority which could provide an acceptable method of accrediting grading organizations.

Under the leadership of J. H. Jenkins, chief, Forest Products Laboratories of Canada, who is also chairman of the wood committee of the Canadian Standards Association, provisional arrangements were agreed upon with FHA and grade marks designed.

However, the FHA decision to make grade marking mandatory carried with it far deeper considerations than that of satisfying immediate U. S. requirements.

It has long been known that Central Mortgage & Housing Corp., was encountering considerable inspection difficulties in satisfying itself that the grade of lumber specified was being used in the places and for the purposes intended.

This is by no means a strange situation.

CMHC inspectors cannot be expected to be expert in determining the quality of the wide variety of materials which enter into home construction.

Without informative marking, they are left to their own devices and their individual opinions.

For some time, it's been expected that CMHC would resort to compulsory grade marking of lumber to protect itself against criticism, to assure the quality of constructions where its monies or guarantees were involved, and to standardize its inspection practices.

The provision of grade marking services have to be organized to meet immediate FHA requirements and expected similar requirements in Canada.

While nothing definite has been announced, it is widely held opinion that CMHC will adopt mandatory grade marking of board and framing lumber in late 1960.

In essence, the responsibility for grade marking will rest with lumber manufacturers associations which now operate grading services, and with any independent grading agencies which may be organized and accredited.

FHA has agreed to recognize the Canadian Standards Association as the accrediting authority in Canada.

The procedure, taking the Canadian Lumbermen's Association as an example, will work like this:

- **CLA will request recognition** by the Canadian Standards Association, and register its grade marks with the CSA.
- **CLA will examine** and certify graders at member mills, and generally police the rightful use of the authorized grade marks.
- **CLA will provide grade marking services** for mills (members and non-members alike) who do not employ graders.
- **CLA graders certificates** will be valid only while the certified grader continues to be employed at the mill for which the certificates were issued. To assure continued competency, certificates will be renewed each year.
- **Grade marks will carry: "CLA,"** as identification of the grade marking authority; the name of the lumber species (spruce, white or red pine, etc.); the lumber grade; and mill identification.

What appeared to be a difficult task, was resolved with relative ease through cooperation of the lumber industry on a Canada-wide basis.

How do lumbermen feel about mandatory grade marking?

Most lumbermen welcome it.

Grade marking is a large step forward, not only in maintaining the good reputation of lumber, but also by providing an effective means of assuring consumer satisfaction.

High Land Costs

(CONTINUED FROM P. 79)

price of a serviced lot costing from $4,200 to $4,500.

Edmonton now owns approximately 250 serviced lots which are scattered in different parts of the city.

When a lot is bought from the city, the purchaser must agree to start building within a year.

This is to guard against speculators.

Some industrial acreage in the Edmonton area has been sold at from $1,200 to $1,500 per acre while as much as $4,000 per acre has been asked for land adjacent to the city.

British Columbia

Because British Columbians look upon themselves as more uninhibited than most Canadians, serviced land for new homes has not been as popular here as in the rest of the country.

However, in the last year or so, those British Columbians who yearn to live untrammeled by regulation and control, have started to grumble because they haven't all the costly services of city people — sewers, sidewalks, paved streets, street lights, etc.

They bought their land from the provincial government, which has no intention of going into the business of supplying householders with domestic services.

When the pressure gets great enough, these sprawling areas, on the outskirts of cities, will have to band together and form a municipality.

Then the services will come and up will go the taxes. It would have been cheaper for people in such areas to have built in a municipality in the first place.

Private developers have been quick to capitalize and, in the vast and terrifically growing areas around Vancouver, are buying up all the land they can and servicing it themselves, with the buyers of lots, of course, paying the piper.

Here's a typical example of a private development in B C.

A man buys an acre for, say, $1,000, and from it gets four or five lots. He does his own servicing—about $1,100 a lot—and then he sells each lot for between $1,300 and $1,800.

The municipalities, naturally, are more than pleased when a private developer services his own land.

Problem of servicing, however, in B. C., doesn't exist chiefly in municipalities, because, in this province, less than one half of one percent of land is within municipal boundaries, though 78% of the population lives in municipalities.

British Columbians, more than most Canadians, have their backs up against town planning.

The result is the vast sprawling area, which is often, to say the least, unbeautiful.

All this freedom, at present, is eventually going to cost a lot of money because as more and more people move into the sprawled areas, come more and more demands from such people for the services that make living more comfortable.

Federal and provincial governments are, to some extent, in the servicing business.

Ottawa pays 75% of the cost, and B. C. 25% on lots the two governments service.

Servicing of lots in B. C. has not put them sky-high in price — there seems to be no racketeering.

Officials of the B. C. Department of Municipal Affairs consider that between 10% and 15% of the average home's cost goes into the property.

Property values in B. C. have a wider range than in most provinces.

There's the small town lot for $1,000

If you want to live on the North Shore of Vancouver, up the mountain, with sweeping views you can pay as much as $20,000 for a 60-by-120 ft. lot—a lot which 25 years ago cost $1,200.

But, with the population increasing all the time, and building booming, more controls will have to come.

So will town-planning, and all such modern amenities — with the result that, inevitably, the taxes will go up, and that's all there is to it.

MARKING THE FACE OF CANADA

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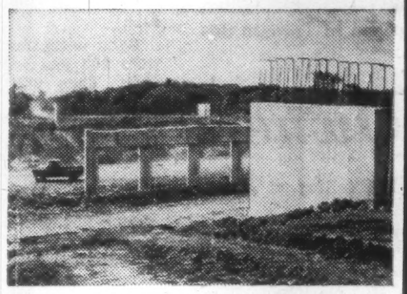
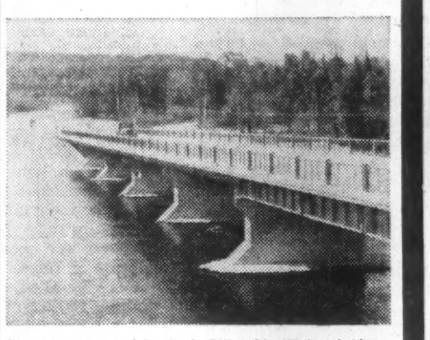
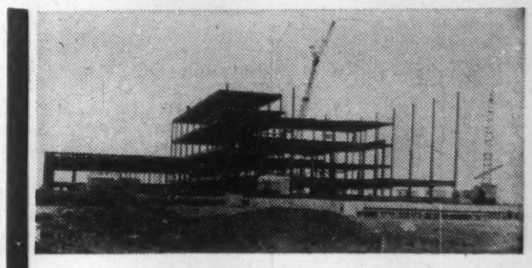
Right: Composite Building, one of five major buildings being erected for Defence Construction Limited at Frobisher Bay, Baffin Island, N.W.T. Project to be completed November, 1960.



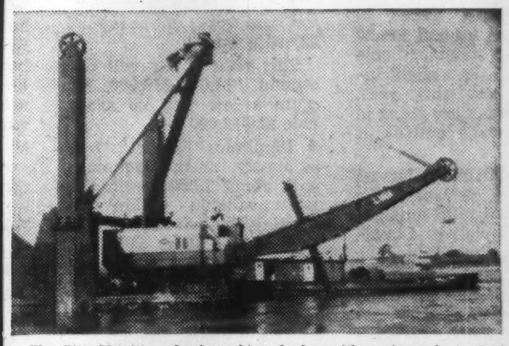
Shown is one of two overpasses being built by C. A. Pitts on the Queensway project for the Ontario Department of Highways, contract 58-651.



Recently completed by C. A. Pitts, this 438-foot bridge over the Michipicoten River, forms part of the Trans-Canada Highway between Wawa and Sault Ste. Marie, Ontario.



C. A. Pitts General Contractor Ltd. and Foley Brothers (Canada) Ltd. in a joint venture are building the 193-mile railroad from Shelter Bay to Lac Jeannine, Quebec.



The Pitts-Merritt, a hard working dredge with a six-yard standard shovel, performed a considerable dredging task while a navigational channel was being cut across Galop Island, part of the St. Lawrence Seaway and Power Project.

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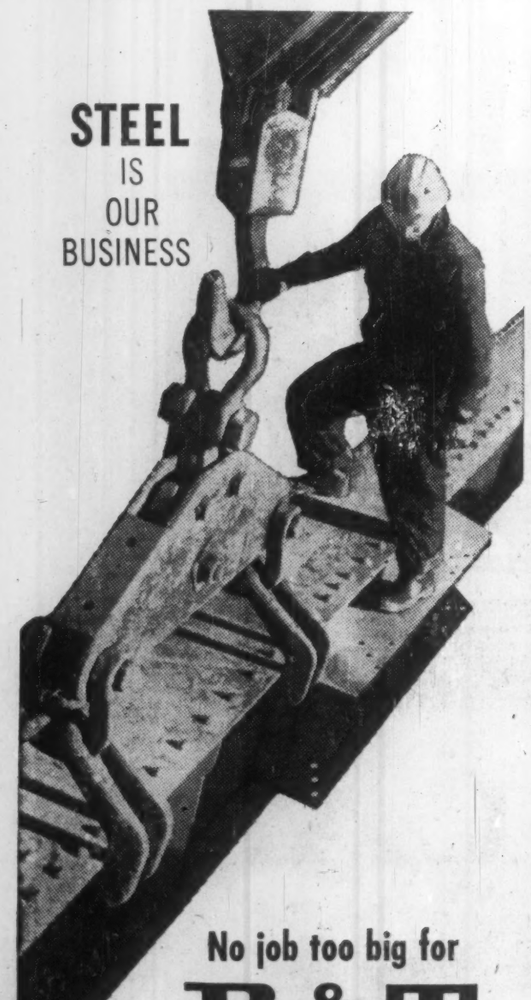

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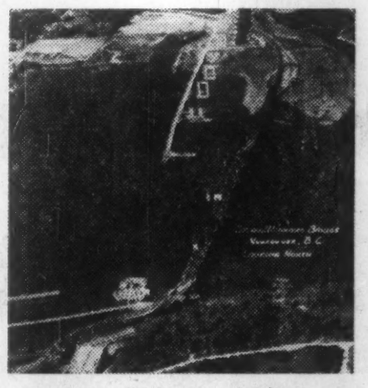

Second Narrows Bridge, Vancouver, B.C., Looking North

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Ontario

Due for New Building Surge

Ontario, Canada's most industrialized province, when final figures are in, is expected to reach the $2.4 billion mark on total construction for 1959. Residential, of course, showed a drop in total starts from 1958, from 63,753 to 54,158. Commercial should total well over $300 million and industrial around $160 million.

The year ahead is expected to show another surge in construction in the province, probably for a new record in value and some increase in the amount of work put in place.

For the first month of the year, contracts awarded were nearly $100 million, about a 20% gain over the same month last year, with brisk movement in business and engineering categories mainly responsible for this.

Industrial was down but, with the economy booming, plant owners who have put off expansion of existing plants or construction of new ones for the past two years are likely to build this year.

Of all the provinces, Ontario, in particular the highly industrialized central Ontario region, will stand to gain the greatest benefits. A 10%-12% increase in industrial building in the province in 1960 would seem reasonable but could easily be larger.

Commercial building, too, should show a gain over last year, with a good 10% gain anticipated.

A category which is going to loom larger in the construction expenditures in every province, and especially in Ontario, is institutional building. In the Toronto area alone last year, around $40 million in contracts for new hospitals and similar buildings were awarded.

Government spending on public works projects looms as a substantial portion of this year's construction spending.

In Ottawa alone, the federal government will spend around $11.6 million on government building. In Toronto, it will spend over $10.5 million in 1960-61, biggest item of which will be $4 million for work on the new Malton jet terminal while a total of $2.5 million is slated for completion of the Island Airport development.

The federal Department of Public Works will also spend around another $10 million in towns and cities across Ontario for public buildings, dredging, harbor development and improvements.

Some of the larger items:

Downsview, Ont., $200,000 building; London, $1 million postal terminal; Hamilton, harbor repairs and improvements, $902,000; Lakehead, harbor improvements, $3.7 million.

Department of Public Works for the province has on hand authorized commitments for construction under way amounting to over $77 million, with construction time extending over the next two or three years.

One of the most substantial and significant items in Ontario's construction bill since World War II has been construction and maintenance of highways and roads.

Volume of highway work completed by the Ontario Department of Highways last year compares favorably with 1958.

Gross expenditures will be very close to the 1959-60 estimates of $273 million.

The carryover of work at April 1, 1960, when a new fiscal year starts, will be slightly lower than the $76 million carried over at April 1, 1959.

The extent and size of roadbuilding for the coming years in Ontario is staggering in its possibilities for construction work and the road building section of general contractors should show consequent growth.

Of the current road bill, about $150 million was for new construction. Another $72 million was paid out in subsidies for municipal road and street and development road construction.

About 478 contracts were completed in the past construction year for capital expenditure and maintenance. Work completed included: 650 mi. of grading, 479 mi. of hot mix paving, 54.6 mi. of concrete paving, 118 mi. of resurfacing and 73 structures.

For the years ahead:

It's estimated that roads and highway needs in the province now, plus needs in the next 20 years, will add up to a staggering $7.2 billion. Of this, some $2.2 billion will be for capital construction.

Expressways projected for metro Toronto, Hamilton, Ottawa and London, totaling some 96 mi., will cost around $500 million.

Of total capital costs, $556 million is needed for improvements right now and an almost equal amount will be required in the next 10 years to keep up with needs.

Maintenance and administration costs for all urban streets for the next 20 years come to $585 million, making total street investment around $2.8 billion.

Capital investment needed on country roads during the next 20 years totals $456 million. Backlog of work needed right now is around $95 million. To this capital investment cost must be added another $275 million for maintenance and administration, for a total of $732 million—or an average of over $36 million a year.

Capital construction costs just for township roads are estimated at $703 million for the same period, plus $451 million for maintenance, etc., making a total of $1.2 billion —or around $60 million a year average.

Provincial King's highways and secondaries need expenditures of $2.4 billion —or around $120 million a year average.

Besides two-lane roads, proposed work includes bringing some 394 mi. of multi-lane highways up to a total of 1,730 mi. Of these, some 1,300 mi. will be controlled-access freeways.

Backlog of construction needed right now totals $476 million on some 2,600 mi. of King's Highways and 2,000 mi. of secondary highways.

Expenditures on roads and highways in northwestern Ontario in the fiscal year 1959-60 will total over $16 million compared with $12.7 in 1958.

One contract for grading, granular base and structure, comprising three quarters of a mile of the Rainy Lake Causeway, will cover over $1.5 million.

A total of 5,190 mi. of provincial highways and municipal roads and streets in the Kenora, Rainy River and Thunder Bay districts is the latest total and of this 2,028 mi., or about 40%, are King's highways and secondary highways.

This represents an increase of over 400 mi. of provincial highways in the area in the past seven years. At the same time, a great many miles of old highway have been completely reconstructed.

Construction of mining and access roads amounting to some 500 mi. of roads to remote areas, plus mining and access roads, has come to $6 million in the past few years.

Under way now is a $15 million roads to resources program, shared by the province with the federal government and, in some cases, with private firms.

One of the most exciting and imaginative projects ahead:

Development of a major port at Moosonee.

Several million dollars will be spent this year on studies of the area. When work is really under way, Ontario Northland Railway will launch a $20-to-$30-million modernization of its line from Moosonee on James Bay to North Bay which is about 200 mi. north of Toronto.

Possibilities for Moosonee and the consequent effect on the province's economy are enormous.

With the expectation of millions of tons of iron ore coming through the port from the Belcher Islands and transshipped to the industrial centres of Ontario, construction work alone in the area will run into hundreds of millions of dollars in the coming years.

In the long term, the economic effect on the more southern portions of the province will again mean a big construction program.

Here are a few highlights of the current construction picture around Ontario:

Recently announced construction contracts: $8.8 million at Lakeview generating station; steel for Malton air terminal, $3.8 million; structures for missile base near North Bay, $2.9 million; sewers, public school, office building and stores, extension to shopping centre, Toronto, $12.2 million.

Bell Telephone last year spent $195 million, a record, in Ontario and Quebec. Of this, $40 million was for land and buildings alone. This year the bill will be nearly $200 million.

Included: A $1 million-plus building in Hamilton to house equipment for recording automatically details of calls for billing purposes; a $4.6 million administrative centre in Toronto; construction of a $4 million cable system to connect cities and towns between Toronto and Montreal, to be finished in 1962.

Construction bill for Bell from 1955-59: $826 million.

There's major expansion under way or about to get under way right across the province, promising to make 1960 the best year yet for construction in Ontario.

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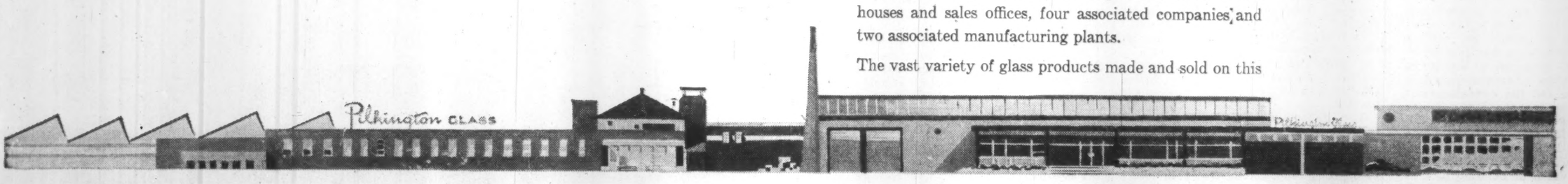

IN the Pilkington files there are records of Canadian transactions which took place in Halifax in 1834. The Company was then but 8 years old, indicating that Canada was amongst the first countries to which Pilkington Brothers exported glass. Today Pilkington is the largest manufacturer of glass in the British Commonwealth.

These early sales in Canada were the forerunner of a Canadian organization that has built a street of glass that now stretches from Halifax to Victoria. Known as Pilkington Glass Limited, it comprises nineteen warehouses and sales offices, four associated companies, and two associated manufacturing plants.

The vast variety of glass products made and sold on this

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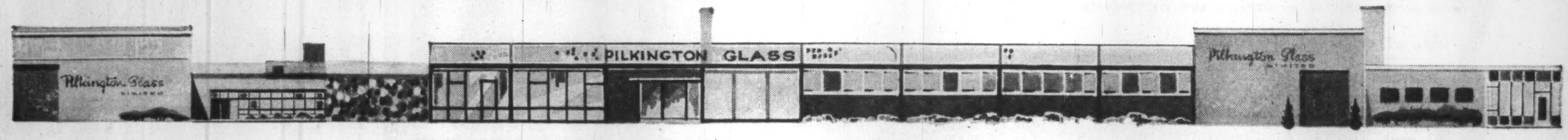

street are among the finest of their kind. Because of their exceptional quality they are in constant demand. And, it is because of the inborn Canadian demand for quality that Pilkington has grown from a handful of pioneer sales agents to a nation-wide street of glass.

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British Columbia

Costs to Rise 3%-5%

Construction costs in British Columbia are expected to rise this year between 3% and 5%.

This figure has been reached by experts in the government's Bureau of Economics and Statistics who conducted a survey of many large B. C. firms, asking their opinions on business for 1960.

Generally, the replies were optimistic, but the firms did not underestimate their problems.

The bureau report says:

"The large construction companies are continuing to suffer from over-expansion resulting from the earlier boom conditions and the entry of some large new firms into the field.

"Approximately half the companies surveyed expect somewhat reduced volumes of work this year."

As to costs, the report says:

"Most firms noted about a 5% increase in raw material prices in 1959, and only a few expect them to remain constant during 1960.

"The industry assumed more stable labor conditions in 1960, with wage increases ranging from 3% to 5%.

"It is felt that the present high interest rates will discourage some construction, although the total value of work performed should be at a satisfactory level."

Development of the Columbia River by the federal government and the Peace River by the B. C. government could give a terrific shot-in-the-arm to the B. C. construction picture in 1960.

Dealing with electric power, the bureau says:

"During 1959, electrical power expansion continued with the addition of 171,000 kw bringing electric generating capacity in the province to approximately 2,899,000 kw.

"Additions to capacity now under construction will add 145,000 kw in 1960, and a further 157,500 kw in 1961."

Additions made to generating capacity during 1959 included 140,000 kw by the **B. C. Electric** and 31,000 kw by the B. C. Power Commission. In addition, both of these utility companies expanded their transmission facilities.

Projects under way include:

- **The last phase** of the B. C. Electric's Bridge River plant, producing 124,000 kw, which is to be in operation later this year.
- **The first phase** of the Burrard steam plant of 157,500 kw which is to be in operation in 1961.
- **Additions** by the B. C. Power Commission to stations at Quesnel, Prince George and Dawson Creek, totaling 12,000 kw.

Construction is expected to continue good in the gas and oil industry."

The speech from the Throne, read at the opening of the legislature said:

"Rapid growth of our natural gas and petroleum reserves in the Peace River area and north to the Yukon boundary has resulted from vigorous exploration and development during the past year.

"Substantial additions to the refining capacity of the natural gas scrubbing plant at Taylor are nearing completion, and as a result a wider range of petroleum products will become available."

Not long ago the B. C. government authorized construction of an oil-gathering pipeline system which, through interconnection with existing pipelines, will transport Peace River crude oil to refineries in the Vancouver area.

The natural gas pipeline from the lower mainland to Vancouver Island will be working late in 1961.

The government is carrying on with its construction programs, feature of which, at the moment, is a new $2 million Law Courts for Victoria.

More millions will be poured by the government into road construction.

The speech from the Throne also said:

"The wide-ranging program of highways construction which—the government is conducting — continued apace last year — and this progress will be maintained and increased.

"The greatest possible amount of this construction, including that of forest access roads, is being done during the winter months . . . to provide steady employment for . . . more . . . citizens."

The government has also promised to put more money into housing for the aged.

Saskatchewan Hits Record In Residential Building

Saskatchewan set an all-time record for residential construction in 1959 with starts totaling 6,105 units as against 5,222 in 1958, an increase of about 20%.

Value of this construction rose to about $68.9 million, an increase of around 26%, according to information from government bureau sources.

Value of all construction amounted to an estimated $375 million, or about $1 million less than the $376 million reported in 1958.

This was accounted for by a decline in construction other than residential.

This type breaks down about as follows for 1959: utilities, $96 million; trade and commerce, $17.5 million; institutional and public works at all levels of government, $119 million; industrial, $70 million.

This year, it is predicted, construction other than housing is likely to increase substantially due, mainly, to the rising pace of activity at the South Saskatchewan dam site and the commencement of work at the Squaw Rapids power site.

Contracts let for the dam in 1959 totaled about $16,346,000.

Value of building permits for 22 cities and towns in the province show total value of permits issued of $98,527,011, as compared with $81,170,637 in 1958 for the same centres.

Outstanding increases are shown by the town of Melville and the city of Yorkton.

On the other hand, construction has fallen off in the former boom city of Estevan, due mainly to less activity in the exploration phase of the oil industry in the southeast.

Weyburn, on the other hand, showed a continued increase.

One factor in this has been the continued development of the Weyburn oil field, resulting in substantial expansion of its perimeter, and the fact that the Weyburn oil boom came later than Estevan's.

While there was a decline in construction other than residential, a notable increase in the number and type of secondary industries in the province was recorded.

New plants announced, or under construction, or starting production during 1959 makes an impressive list in this one-time single-industry province.

The following are the major projects:

- **Regina:** basic steel mill, $15 million; steel fabricating plant, $1 million; corrugated paper box factory, $750,000; plant for production of industrial gases, including oxygen, $750,000; sheet steel fabricator, $250,000 and vegetable growing and processing project, $200,000.
- **Saskatoon:** feed mill $1 million; shotgun shell factory, $600,000; office and school equipment factory, $250,000.
- **Moose Jaw:** factory for construction of metal buildings, $500,000.
- **Hudson Bay:** wafer board factory, $1,600,000.
- **Alida:** gas conservation plant, $1,200,000.

There were a number of other small industries started or under construction at scattered points in the province during the year.

Further development of minerals in the north, also involving construction, will give impetus to the extractive industries, while the timber resources of the north have still to be fully exploited. Potash development is just beginning.

All this will require construction of various types, including residential.

Secondary industries are generally admitted to be the only answer to Saskatchewan's static population problem.

There was evidence of this in 1959 when the population showed a net increase, passing the 900,000 mark.

Alberta Housing Hits High Mark

Despite tight mortgage money and higher interest rates, building construction was maintained by Alberta in high gear during 1959.

The provincial bureau of statistics has estimated that the total value of building permits issued last year was $268.6 million, compared with $258.5 million the previous year.

A breakdown shows that 10 Alberta cities accounted for $203.1 million of the over-all total.

In the previous year, the cities reported a total of $196.6 million and other municipalities $61.9 million.

Non-residential construction declined during 1959.

During the latter part of the year industrial construction was $16 million ahead of the similar period in 1958 while business construction had recorded a gain of 30%.

Employment in the industry was higher than in 1958 and many projects were timed to provide continuity over the 1959-60 winter season.

Home construction hit a high mark in Alberta during 1959.

Central Mortgage & Housing Corp. reported 11,539 completions during the year.

Estimated cost on an average basis of $12,500 per house is $147.5 million, as compared with $133.3 million in the previous year when the completions totaled 10,671.

Calgary led the province last year with 5,279 completions while Edmonton had 5,265, Lethbridge, 544, Medicine Hat, 333, Camrose, 59, Grande Prairie, 59, and Red Deer, 264.

In 1958, Calgary reported 4,921 completions, Edmonton, 4,702, Lethbridge, 354, Medicine Hat, 284, Camrose, 25, Grande Prairie, 171, and Red Deer 214.

Business contracts awarded in Alberta in the 10 months ended Oct. 31 numbered 793 for a total of $86.5 million, as against 713 for a total of $63.7 million in the comparable period of 1958.

The building total also included 62 contracts for industrial projects estimated to cost $21,136,700.

In the previous year, this category showed 72 contracts for a total outlay of $4,807,600.

Under the heading of engineering, 257 contracts were awarded in 1959 which involved a construction cost of $59.4 million, compared with 216 the year before when the estimated expenditure for this purpose was $62.1 million.

One of the big factors in Alberta's industrial construction is a $45 million hydro power site to be developed on the Brazeau River, 96 mi. southwest of Edmonton, by **Calgary Power Ltd.**

When completed in four years, the plant will have initial 200,000 hp capacity, one of the highest in Canada.

Preliminary work has started on two 18-ft. diameter 1,000-ft. long concrete underwater conduits, for water diversion purposes. This contract amounts to nearly $2 million.

Calgary Power also is going ahead with extensions to the Spray and Rundle hydro power plants, west of Calgary, which will be put into service this fall at a cost of $6.5 million.

Capacity of the two plants is being nearly doubled.

Plans also are being advanced for a newsprint mill in the Edmonton area at an estimated cost in excess of $20 million.

Two other pulp mills also are proposed. One is near Red Deer, in central Alberta, and the other at Grande Prairie in the Peace River country.

Alberta's construction program this year also will be helped by expansion of oil refineries and gas processing plants.

Estimated to cost $7 million, two new oil refineries will be built in the Innisfail area, in central Alberta.

These will be operated by **Canadian Oil Companies Ltd.**, for Innisfail field producers.

Construction is in progress on one refinery and the general contract for the other has been awarded.

Construction of a $17 million gas processing plant in the Rimbey district, 85 mi. southwest of Edmonton, has started and will be one of the major projects for 1960.

Engineering studies also are being made of plans to erect a gas processing plant in the Windfall area, 125 mi. west of Edmonton.

This project will be undertaken if the export of surplus Alberta gas to the U. S. is approved. The cost of this plant would be in excess of $15 million.

Another of the major Alberta construction projects for 1960 is a $15 million international airport to be built at Nisku, 16 mi. south of Edmonton, by the Department of Transport of the federal government.

Two runways, one 10,000 ft. in length and the other 11,500 ft., were completed in 1959.

This year, construction will go ahead as soon as spring conditions permit on an $8 million permanent terminal building.

The program includes a $1 million heating plant.

Construction at the University of Alberta in Edmonton is another highlight of the 1960 program. It is estimated that a $12.2 million program of new buildings, one of the largest at any university centre in Canada, now is in various stages.

An addition to the medical building, costing some $2.7 million, is expected by next fall.

Contracts have been awarded for a physics-chemistry-mathematics building which will cost more than $6 million.

Work also is going ahead on a five-story addition to the engineering building at a cost of $1,750,000.

The university board of governors has approved a recommendation that a new education building be erected at a cost of nearly $3 million.

It is hoped to complete such a seven-story structure by the fall of 1961.

Another project that stands high on the 1960 list is a new $9 million 600-bed hospital to be built by the Royal Alexandra hospital board in Edmonton.

Tenders are expected to be called this spring.

In Camrose, 65 mi. southwest of Edmonton, a $10 million steel pipe mill is being built by **Page-Hersey** and **Steel Co. of Canada.** This is scheduled for completion during 1960 and will be capable of producing steel pipe ranging in diameter from 16 in. to 42 in.

Building permits for the Calgary metropolitan area last year topped the total of $111 million in 1958.

The Edmonton area had a total valuation of $97.1 million in building permits.

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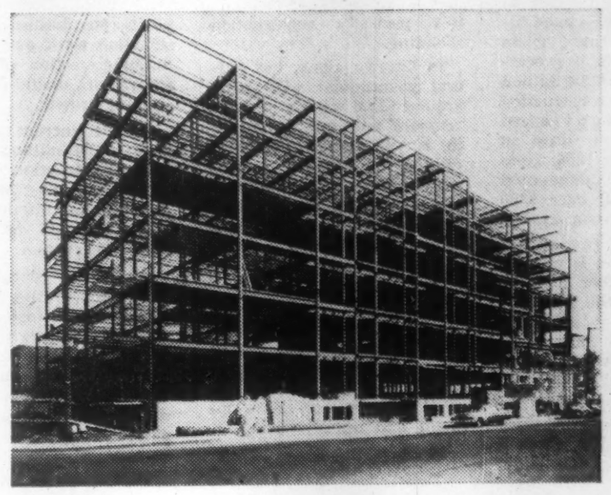

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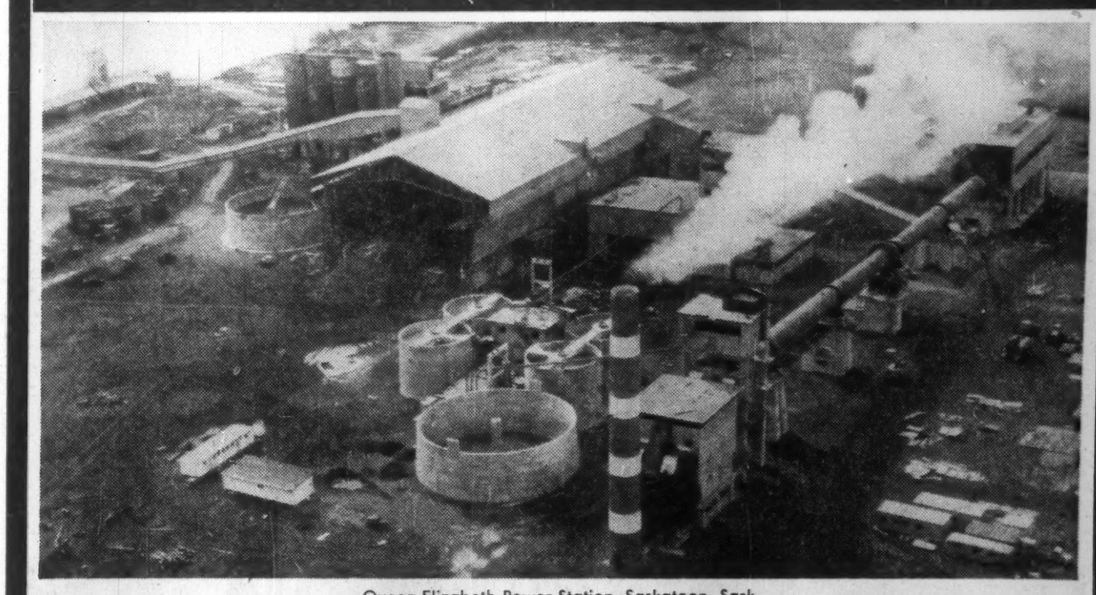
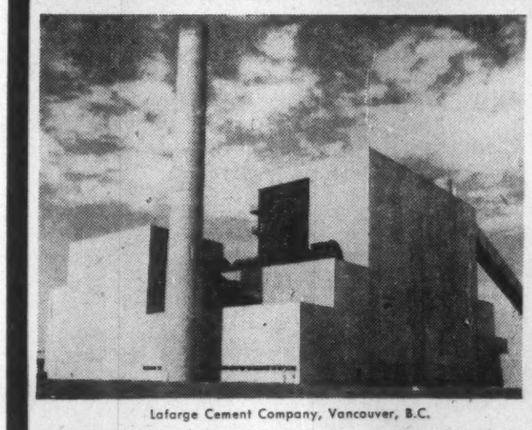


Queen Elizabeth Power Station, Saskatoon, Sask.

Parking Garage, Toronto, Ontario

Montreal Children's Hospital



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Manitoba
Gets Nuclear Station

The construction industry more than held its own as one of the major segments of Manitoba's economy in the province's 1959 progress story.

In volume it exceeded 1958.

The percentage increase according to unofficial figures of the industry may have been highest of any province in Canada.

Except for the last quarter of the year when there was a slight drop there had been a steady rise.

Late year restrictions on supply of mortgage money slowed housing construction but in spite of it, starts on new dwelling units were higher than in 1958.

The start of 1960 gives signs that construction is in for another good year.

Apart from normal volume of residential, commercial and industrial building, several major projects are scheduled for a start this year.

To mention three:

- **The $140 million hydro development** on the Saskatchewan River at Grand Rapids, to be completed in five years.
- **A $10 million air terminal for Winnipeg.**
- **Start on the 11,000-acre site** of Whiteshell nuclear research establishment 65 mi. northeast of Winnipeg.

Including all categories of building, residential, industrial, commercial, government and municipal work, public utilities, engineering projects and highway building, total actual construction in 1959 ran between $250 and $275 million.

The 1959 total is below figures of the business finance division of the Dominion Bureau of Statistics which earlier had estimated a total construction volume of $392.5 million.

The wide variation is partly because of a different yardstick of computation by DBS which takes into account work which the construction industry does not include in compiling its records.

In Greater Winnipeg, the 1959 permit total reached a record $94 million — $47 million more than 1958 and $4 million above the previous high of 1955.

Dwelling permits were up $2 million. Industrial and commercial structures accounted for most of the increase.

Only four Winnipeg suburban municipalities had lower building permits than in 1958.

The suburban city of St. James set a record for the second consecutive year with $13.7 million in spite of a $2 million drop in its housing construction.

Counting six centres of population for which records are kept by Central Mortgage & Housing Corp., Greater Winnipeg, Flin Flon, Portage la Prairie, Selkirk, Brandon and Dauphin, 5,745 housing units were started in 1959 and 4,906 in 1958. And 4,650 were completed in 1959 compared with 4,190 in 1958.

Apartments and suites were the big feature of 1959 dwelling construction.

There were 1,502 of these multiple units completed in 1959 as against 745 in 1958.

The ratio of occupancy was also higher.

At end of the year, CMHC reported only 85 vacancies. At end of 1958 there were 148.

The housing starts of 1959, represented an eventual capital outlay of close to $75 million.

The record 1959 highway program projected a year ago at $33 million didn't reach its target because of a wet construction season.

As a result there will be a carry-over into 1960 of at least between $5 and $6 million.

Public utility construction totaled about $50 million, better than half of it by **Manitoba Hydro Electric Board** whose capital outlay for the year was $25.5 million.

The expenditure was for continuation of work on the Kelsey hydro plant in northern Manitoba and the new steam plant at Selkirk.

Two units of the latter are to be completed in 1960.

The rest of public utility construction has been by the **Manitoba Telephone System**, the **Manitoba Power Commission** for strengthening its distribution system, and $5 million by **Greater Winipeg Gas Co.** for additions to its main system in Greater Winnipeg.

Institutional construction, including schools and churches, and municipal improvements for street construction, sewer and water systems, accounted for about $12 million.

Among major projects listed by the provincial Industry and Commerce branch at end of the year:

- **Dominion Structural Steel**, St. Boniface, new fabricating plant, $500,000.
- **D. W. Friesen & Sons**, Altona, printing plant $200,000.
- **Imperial Oil Co.**, alkylation plant for manufacturing aviation gasoline, $2.6 million.
- **Griffin Steel Foundries**, Transcona, completed, total cost, $5 million.
- **Peerless Garment Centre**, Winnipeg, new garment manufacturing plant, $300,000.
- **Old Dutch Foods**, Winnipeg, new manufacturing operation $150,000.
- **Souris Producers Ltd.**, at Souris, vegetable processing plant, $120,000.
- **Plum Coulee Growers Ltd.**, Plum Coulee, vegetable processing plant, $120,000.
- **National School Studios**, St. James, new plant $250,000.
- **Building Products Ltd.**, Winnipeg, addition to plant, $1 million.
- **Border Chemicals Ltd.**, new sulphuric plant at Transcona $1 million.
- **Bond & Ronald Co.**, candy and confectionery manufacturers, new factory in Winnipeg, $500,000.
- **Barkman Concrete Products**, addition to plant at Steinbach, $200,000
- **C. T. Loewen & Sons Ltd.**, Steinbach, new woodworking plant, $435,000.
- **Eastern Machine & Tool Manufacturing**, St. James, new test laboratory and plant, $200,000.
- **Brooks Equipment Ltd.**, St. James, office and warehouse, $275,000.
- **John Deere Plow Co.**, St. James, storage building, $150,000.
- **W. H. Escott Co.**, St. James, warehouse, $125,000.
- **Hudson Paper Co.**, Winnipeg, new distribution centre, $450,000.

The list does not include a score or more of others of equal or larger cost, nor does it include 1959 work by **International Nickel Co.**, at Thompson; the $5 million plant of **Campbell Soup Co.**, at Portage la Prairie; the provincial government administration building costing $5 million; work on the new Symington yards of the **Canadian National Railway** to be completed in 1962 or 1963 at total cost of $24 million; nor large developments at Polo Park Shopping Centre.

Turnbull Designs New Door For Calgary Airport Hangar

The new aircraft hangar at Calgary's McCall Field features a new concept in doors.

These custom designed doors can present a clear hangar opening of as much as 200 ft. located or distributed anywhere across the entrance.

The system is composed of four five-leaf sandwich sections, each of which may be automatically telescoped to cover some 13 ft. to 63 ft. of the total opening.

The electrically driven groups of leaves may be located anywhere across the hangar opening which, at McCall Field is 252 ft. wide and 30 ft. high.

The stacking feature of this new door eliminates the need for wide pockets at the sides or for expensive overhead doors. Yet, it affords great flexibility and economy in handling aircraft.

The system was designed, fabricated and erected by the hangar door division of the **Turnbull Elevator Co.** specifically for this project.

This installation marks one of the first examples of Turnbull's entry into the design and manufacture of extremely large doors. The company has been the largest wholly-owned Canadian manufacturer of elevators for more than half a century.

As one company executive explained: "Hangar doors are really very similar to elevators. Our entering this field **is a** natural development.

"In both cases," he continued, "the problem is to move large masses of steel with a minimum of effort and a high degree of precision . . . and at a lower cost for the fabrication and installation in each case. The skills acquired through our elevator design and production can be directly applied to serving our hangar door customers."

P.E.I. Has Big Carryover Of Construction From '59

Bright prospects are seen for construction in Prince Edward Island this year.

No one who is looking for work should be without it by July, say the planners.

There is a large carryover of uncompleted construction from 1959. **Contracts worth $14 million were let at the RCAF Station in Summerside alone.**

The town of Summerside stepped into the construction picture with more vigor than ever with an estimated value of $2.9 million

The $1 million Hillcrest housing development comprising 100 units has fallen short of meeting the demands of Air Force personnel.

Indications are that residential construction will be important in the future in several Island centres.

Co-operative housing is in the experimental stage but interest is increasing and early construction is forecast in this field for the Charlottetown area.

Some major construction work completed in 1959, or still under construction, includes: Cantilever and readiness hangars at the RCAF Station, the Hillcrest Housing development, the Canadian Legion home, the Roman Catholic Church, **Sobeys** supermarket, **Steadman's** department store and a small manufacturing plant, all in the Summerside area.

In the Charlottetown area: $1 million wing for the Prince Edward Island Hospital, a $500,000 Nurses' Residence at the Charlottetown Hospital, a Naval establishment, the **Royal Bank,** two churches and a ladies' residence at Saint Dunstan's University.

Extensive work was also done at railway wharf in the erection of a new frost-proof transit shed and power house.

At another waterfront site in Charlottetown, **Texaco** erected a bulk storage facility capable of accommodating the company's largest tankers.

Irving Oil is reported negotiating for property in Summerside to erect a six or eight-tank bulk storage plant and indications are that another supermarket may open up in that rapidly progressing town.

Forecast for other parts of the province are a $75,000 medical clinic, a $100,000 addition to the Charlottetown Hospital, a $500,000 basilica parish hall, a $350,000 dormitory for Prince of Wales College, a $75,000 addition to the Prince Edward Island Hospital and a $75,000 grandstand at the Charlottetown Driving Park.

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Quebec

Prepares for New Spurt in 60s

There probably will be no significant changes in the construction picture in Quebec this year.

Rather it will be a year of planning, of solidifying a base from which to launch the new spurt that's almost certain to come as the decade unfolds.

For 1959, contract awards in Quebec totaled $913 million, down 12.4% from 1958.

The current year should see a slight increase but this will be due to a large extent to cost factors, leaving the industry with about the same amount of actual work.

J. Eric Harrington, president of the Canadian Construction Association, forecasts a $7,500 million dominion-wide put-in-place construction program for this year.

This represents a 2.7% increase over latest 1959 estimates.

Not all sections of the country will share the improvement but Quebec, which settled back a little in 1959, seems to be favorably situated.

Only likely soft spots:

- **Home building.**
- **Municipal construction.**

Residential building, which in the last decade has accounted for 32% of Quebec's construction total, will be down again.

There was a 7% decline in housing starts in 1959.

At year's end there were 17,000 houses under construction in Quebec and obviously the province wouldn't be able to absorb another 32,000 starts.

Spiraling interest rates, reduced mortgage money and less government encouragement have been factors in a housing slowdown which started in mid-1959.

Tight money also will affect municipal construction.

Rather than enter the scramble in the money market and be faced with high rates while competing against senior governments and corporations, many municipalities will defer long-term projects.

Some of this slack will be taken up by commercial building which, unlike other sections of the construction industry, showed little decline in 1959.

The trend is particularly apparent in Montreal where a few big office projects alone represent well over $200 million in capital investment.

Heading the list are **Webb & Knapp (Canada) Ltd.'s** $75 million Place Ville Marie development and the **Canadian Bank of Commerce's** $42 million Windsor Plaza building.

Associated with the bank is **Maxwell Cummings & Sons**, Montreal realty investors.

Institutional building will continue to play a major role in the 1960 construction picture with a $140 million hospital expansion program and a $60 million university building boom under way.

Likely a good deal of new money to be made available to Quebec's institutions of learning will go into expansion of facilities.

Road building and public works won't slacken.

Quebec intends to pursue its road building program and will concentrate this year on improvements around Montreal and Quebec City to relieve traffic congestion.

On the drawing boards are two new bridges to ease the flow of traffic between Montreal Island and the mainland to the south and west.

Industrial building will depend to a large extent on the general business outlook and the availability of corporate funds. However, the outlook is good.

Example:

Projects being planned for the chemical industry in Quebec for this year are greater than in 1959 and sums invested appear to be higher.

The steel industry has a wide array of plans on its drawing boards.

According to Albert L. Fairley Jr., president of **Dominion Steel & Coal Corp.**, the virile steel industry will double its capacity in the next 20 years.

Logically, a good deal of the expansion will take place on the South Shore to serve the Quebec market.

Already **Steel Co. of Canada** has established a $10 million pipe mill at Contrecoeur and **Crucible Steel Co. of Canada** plans to expand the steel facilities acquired from **Sorel Industries Ltd.**

Dosco is planning a multi-million project in association with **Sogemines Ltd.** and **Quebec South Shore Steel Corp.** may undertake a pig iron and steel operation in association with **Koppers of Canada Ltd.**

Quebec Natural Gas has a $44 million expansion program, some of it designed to serve industrial sections along the South Shore.

About $12.3 million will be spent by QNG on construction in fiscal 1960, $12.4 million in fiscal 1961, $9.2 million in fiscal 1962, and $10 million in fiscal 1963.

On the growing North Shore, where new industrial empires are being hewn out of the wilderness, the big story is construction of new iron ore developments.

Closest to production is the $300 million development of **Quebec Cartier Mining Co.** at Lac Jeannine, 150 mi. from Seven Islands.

Iron Ore Co. of Canada is pushing its $125 million Carol Lake project with its 1962 production target date.

Ungava Iron Ores Ltd., controlled by **Cyrus Eaton-Krupp** interests, hopes to start work on the shore of Ungava Bay within a short time.

Company is awaiting final decision by the German backers. Development would include construction of a harbor and frontier town at Hopes Advance.

Meanwhile **Wabush Iron Co.** is busy in the area.

Power developments will provide new impetus for the construction industry as the province continues to exploit its rich hydraulic resources to meet increasing demands for power.

In the next decade, expenditures on power plant construction in Quebec will go beyond $1,000 million.

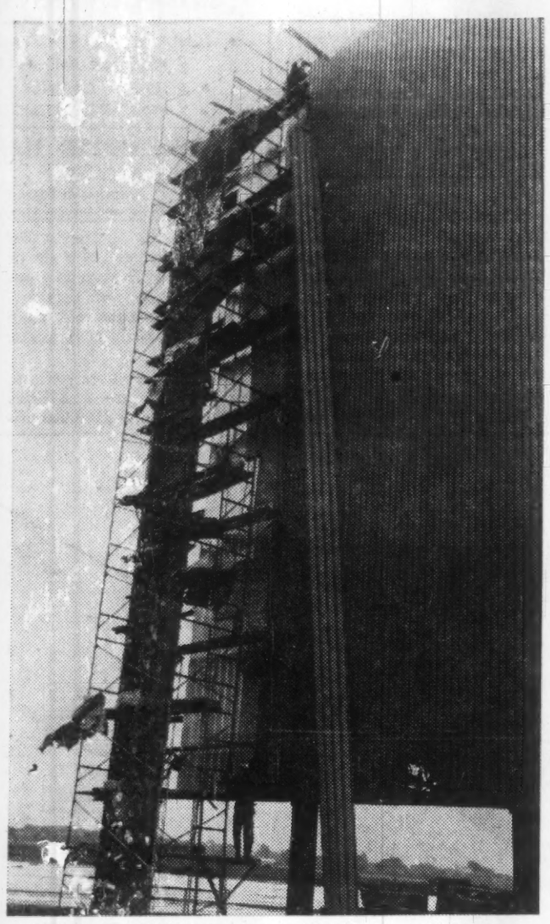
Hydro capacity placed in operation in 1959 amounted to 1.8 million kw. During the next few years installations now under construction or planned will provide a further three million kw. to meet future needs.

Quebec Hydro - Electric Commission has started work on its $200 million Carillon development on the Ottawa river and has gotten the $275 million Lachine project into planning stages.

Also in Quebec **Shawinigan Water & Power Co.** is pondering new construction on the St. Maurice River and is studying entry into the thermal field.

Long-range forecasts are that the Quebec construction industry will continue to grow although the ratios of expenditures to income likely won't be as high as they were in the years 1956-58.

Current rate of growth is a little more than 7% with most spectacular gains in the utility sector, which includes electric power, transportation and communications.



ALUMINUM PANEL being installed on new TCA hangar at Dorval.

Nova Scotia Boom Nears $200 Million

Construction in Nova Scotia continued at a healthy pace in 1959 as it pushed toward $200 million, up from $165 million in 1958.

Much of the heavy construction took place in Halifax where an all-time high of $18 million was attained.

Prospect for 1960:

A further boom. In the capital city alone projects in progress nudge $30 million.

Major undertakings in Halifax this year:

- **Expansion** of the Victoria General Hospital, $10 million.
- **Addition** to the Halifax Infirmary, $6 million.
- **Webb & Knapp's** shopping centre, $7 million.
- **Mulgrave Park** housing project, $4.5 million.
- Liquor commission warehouse, $1.5 million.

Elsewhere in the province projected industrial construction for 1960 totals $50 million.

Spearheading the construction now under way is the $40 million plant of **Nova Scotia Pulp Ltd.** at Tupper's Point in Cape Breton. Work will continue for the next three years.

Outside Halifax last year general construction was boosted to $13.5 million, including the $12 million air base development at Greenwood.

Schools at Bridgetown ($197,000), Mount Uniacke ($100,000), Advocate ($170,000), Parrsboro ($311,000) and Tednish ($12,000), highlighted institutional construction.

In 1960 look for these major projects over $1 million:

- **Married quarters** at Greenwood, $4 million.
- **Shopping centre** at Sydney, $2 million.
- **Hospital** at New Waterford, $1.2 million.
- **Institute of Oceanography** at Dartmouth, $3 million.

Construction just under $1 million includes:

Regional high school, Windsor, $500,000.

Soldiers Memorial Hospital, Middleton, $800,000.

School at Hansport, $350,000.

Hospital at Springhill, $900,000.

Building projects on the planning boards in Halifax area:

Grace Hospital, $1.5 million.

French cable wharf, $750,000.

Shearwater air field, $350,000.

Nova Scotia Technical College, $800,000.

Rehabilitation centre, $500,000.

Woodlawn High School, $500,000.

Jobs announced for 1960 include: Spryfield school ($192,000); Westwood park housing ($2.5 million); housing project on the School for the Deaf property in Halifax ($3.5 million).

Over-all Nova Scotia construction in 1959 reached $190 million — a jump of $25 million over the previous year. Engineering building, which includes roads, utilities and public works, topped the lists of projects at $88 million, a gain of $12.9 million.

Dominion Stores Ltd. has embarked on a big building year. Plans call for construction just under $1 million. Sites are in Halifax, Bridgewater, Kentville and Truro.

In Halifax last year an abattoir and a city incinerator were built at a combined cost of $2 million.

The Sir James Dunn building and the new men's residence at Dalhousie University mean an expansion of $3.5 million. Additions to the Lord Nelson and the Nova Scotian hotels are being undertaken at a cost of $4.1 million.

Cossor (Canada) Ltd. built a $750,000 plant at Woodside last year. Work on the $6 million Halifax International Airport is virtually completed.

In 1959 building set a rapid pace in Dartmouth, soon to become the province's third city.

Construction absorbed $3.2 million — highest since 1955.

In Sydney, the province's second city, there was a slight drop in construction. The decline followed completion of a $300,000 school building program in 1958.

Nevertheless the steel city's building program topped $2 million.

The new James McConnell Memorial Library ($146,000) has been turned over to the city.

Other projects under way: St. François Xavier University arts building ($649,000) and Community Motel ($300,000).

Residential building in Sydney continued brisk, hitting $1 million with 135 new units and additions to others. Commercial building was $649,000; institutional $477,000.

Future building in Sydney will include an **F. W. Woolworth** store ($250,000) and a **Stott Aluminium** plant ($80,000).

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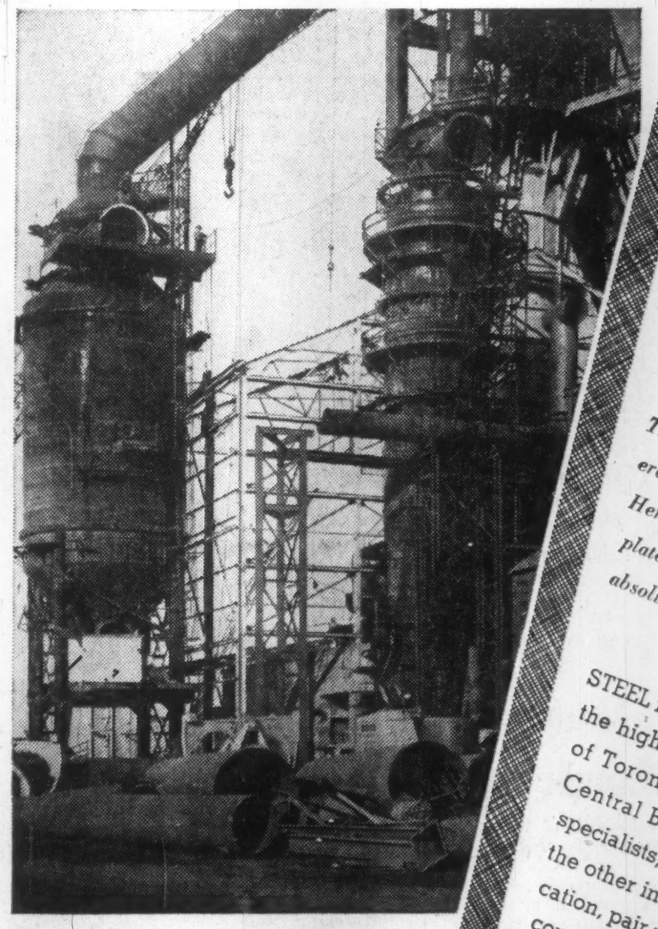

Pair-Up Pares Costs

This busy looking job is titled: the erection of a Canadian steel mill. Here close co-operation between plate and structural fabricator is absolutely essential.

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New Brunswick

Will Exceed $175 Million

Major public, semi-private and private construction projects slated for New Brunswick this year will top $175 million.

This represents a substantial drop below last year's $225 million estimate, accounted for by completion of **Irving Refinery Ltd.'s** $50 million oil refinery at East Saint John scheduled for February.

Provincial, federal and civic undertakings will take up yard of $75 million with Crown company and private projects adding another $100 million or more.

Scattered through the province the projects cover a wide range of undertakings, including construction of highways, docks, bridges, railway yards, housing developments, new plants and expansion to existing industries.

Commencement of **Rothesay Paper Corp.'s** proposed newsprint mill at East Saint John would add another $35 million to the picture.

And an upward swing in base metal prices could also see a start on planned concentrators and smelters at Bathurst and Woodstock to further boost the over-all total by $50 million before the end of the year.

Highway construction, bridge building and maintenance is expected to run to last year's $30 million or more.

Last year the province spent around $20 million on its roads and another $11 million on Trans-Canada Highway work.

However, with the seven TCH by-passes scheduled to be completed by the end of the current calendar year the bulk of the province's 1960-61 appropriation will probably be applied to work on its main trunk, secondary and branch roads.

Meanwhile, the provincial government spent well over $1 million in 1959 opening up roads to heavily wooded sections under an $18 million federal-provincial roads-to-resources plan.

School construction throughout the province ran to roughly $3.5 million last year and is expected to reach that figure during 1960-61.

Hospital expansion will probably equal last year's $3 million and Central Mortgage and Housing projects in various provincial centres run to around $7.5 million.

Besides spending $5 million on its $12 million thermal plant at East Saint John, the **New Brunswick Electric Power Commission** is earmarking another $9.5 million for construction of terminals, expansion to plants and distribution lines.

This represents a jump of $3 million over last year with $1.2 million marked for a start on a third unit at its Beechwood hydro plant, $700,000 for improvements to its Grand Falls hydro station and the balance for expansion of transmission lines.

Largest private undertaking in the province's history, the $50 million Irving oil refinery at East Saint John is virtually complete.

On completion of the refinery the Irving interests are making a start on an $8 million chemical plant, which ties in with it, and a $1 million causeway linking East Saint John with the city proper.

Purchased by the Irving interests last summer, present indications are that the **Saint John Dry Dock** will have a steady work-load over the next few years.

Under new management the dock is getting a thorough check-over to give it maximum efficiency and some of its facilities are to be extended.

Already well past the planning stage is an expansion program that will run into several million dollars.

Meanwhile, at Lancaster on the west side of Saint John, a kraft and paper mill is being erected by the alliance of **Irving Pulp & Paper Co.,** and **Kimberley-Clark Corp.,** Neenah, Wis. Completion expected by late summer or early fall this year.

Canadian Pacific Railway has before the Lancaster City Council a proposed $1 million expansion program in the area.

Other commercial and private interests are planning erection of a shopping centre, warehouse and two churches at total estimated cost of $1 million.

At the same time CPR plans a new marshaling yard at South Bay in the Saint John area.

To date, $100,000 has been spent in preparation, with the total cost estimated at more than $750,000.

To accommodate piggyback and other trucking, new offices, a terminal and garage have been erected by **Smith Transport Ltd.,** at the site.

It is planned to transfer the piggyback accommodations, now at Mill St., Saint John, to the new terminal.

Part of last year's $8 million appropriation for New Brunswick, the federal government's $3 million dredging and harbor improvements program is still in the construction stage, expected to be complete this year.

The federal government also is erecting a $1 million **Bank of Canada** building in Saint John and the provincial government a $1 million office building.

S. S. Kresge Ltd. has before Saint John City Council a $1 million-plus proposal for a new store and market in the heart of the city.

Dominion Stores Ltd. has a new supermarket under construction and is surveying further sites.

Sobey's Ltd., with two outlets, will soon open a third, and **Steinbergs Ltd.,** has announced plans for its first Saint John outlet.

Last August **Cemp Investments Ltd.,** Montreal, started construction on a 17-store shopping centre in Saint John's Shamrock Park recreation area.

At Moncton, **Canadian National Railways** has let a number of contracts for erection of buildings and other facilities in its $15 million hump yard on the outskirts of the city.

A $2 million technical institute being erected by the province, planned construction of several housing developments and apartment houses has pushed building permits to around the $5 million mark.

Last year the city's building permits passed $8 million and officials are confident this year's will pass $10 million.

With completion of the Princess Margaret Bridge and local TCH by-pass, construction figures for Fredericton and nearby communities this year will show a sharp drop from those of 1959.

However, construction of the $1,768,000 federal agriculture research laboratory is still going ahead.

The $3.2 million first-stage projects at the University of New Brunswick are well under way and scheduled to be completed by the end of the year.

Construction Industry Helps Build Newfoundland Economy

Construction continues to play an important part in the economy of Newfoundland.

Outlook for 1960: extremely promising.

In St. John's finishing touches are being applied to the $8 million Confederation Building which will house 98% of the provincial government offices.

Work started last June on the first five buildings for the new university, estimated to cost $13 million.

It is hoped to begin construction this year of the first residence unit and a dining hall for students.

The Newfoundland government made the same type of deal with **Whitney-Hansen** for the university as it did for Confederation Building — a 25-year buy-back plan at an annual fixed fee.

In case of the buildings, several millions' worth of local material are being used — cement, gypsum, wallboards and doors, etc.

Newfoundland has a denominational school system for grade scholars and in the past five years the first regional high schools have been built.

One will be completed by June for the United Church Board of Education in St. John's.

Bishop's College, also a regional, for the Anglican church, opened in November. Both cost about $1 million.

Concrete is being poured for the new Roman Catholic regional high school.

This will house 750 boys and will cost close to $850,000. Adjoining is a residence for girls and teaching sisters. Another $1 million will have been spent when this is completed next September.

Several old schools are being enlarged to accommodate the expanding school population.

A labor force of nearly 600 is now employed on the university and other school projects in St. John's.

Considerable progress was made last year on the two-wing extension of the General Hospital.

This extension will provide pathological laboratories, enlarged X-ray diagnostic and therapy facilities, including a Cobalt 60 unit, and a complete new operating suite.

Cost: $2 million.

Canadian National Railways is replacing its burnt-out express office and is extending yard facilities which will include an access road overpass. This job is also over $1 million.

There are plans for the construction of a large motel which may exceed $200,000.

St. John's Housing Corp. is draining and servicing its last large slice of land in the city's new housing area which will be laid out for 34 building lots in the spring.

Bank of Montreal is contemplating replacement of its main branch in St. John's with a structure that may cost $1 million.

Completed and occupied late in 1959 were the two big federal buildings in St. John's — Sir Humphrey Gilbert Building for customs and the Post Office. Both run close to $5 million.

One new church was built in St. John's in 1959 in the new housing section and another is contemplated for 1960 to cost $75,000.

The harbor development project is the biggest single item but that is to be spread over five or six years.

A $3.5 million contract was let early in January for huge finger pier and associated work.

A $256,700 contract covers the removal of part of a sunken ship in the harbor.

Slowed down until recently, the big harbor job will get into full stride in the next few months and employ an additional 200 or 300 workers.

Outside St. John's there is much activity in the construction field—present and prospective.

At least four new schools ranging in value from $50,000 to $1 million will start this year.

At Grand Falls **Anglo-Newfoundland Development Corp.** is expanding its newsprint mill and is enlarging many of its woods labor camps.

A 26-room motel is slated for Gander and there is $1 million hospital for Grand Falls, work to start in summer.

The community has raised $400,000 in cash and pledges and the rest will come from provincial and federal governments.

At Corner Brook the CNR started a big yard improvement program with associated buildings.

This project will be finished late in 1960.

Value of construction in St. John's and within one mile of the boundaries which come under Municipal Council regulations, in 1959 was $28,963,590, which included $14,602,000 in carry-overs to 1960.

If more land had been serviced in the city in 1959, more residential housing would have been undertaken.

In St. John's last year 193 bungalows at $2,566,350 were finished along with eight two-story dwellings at $137,000. There were 70 extensions to residences at $133,330; 27 extensions to business places at $181,800; 23 alterations to business places at $203,800; 10 new business premises at $723,500; three school extensions and alterations at $240,000.

In the one-mile limit were 19 bungalows at $250,000 and two schools and churches valued at $237,000. Two new business premises at $160,000 were also constructed in this region.

A big factor in construction in the past 19 years has been the U. S. government through its military bases in the province.

A contract is due March 1 for the U. S. Naval Station at Argentia covering a barracks building, a recreational building and an addition in the heating plant. Value: over $1 million.

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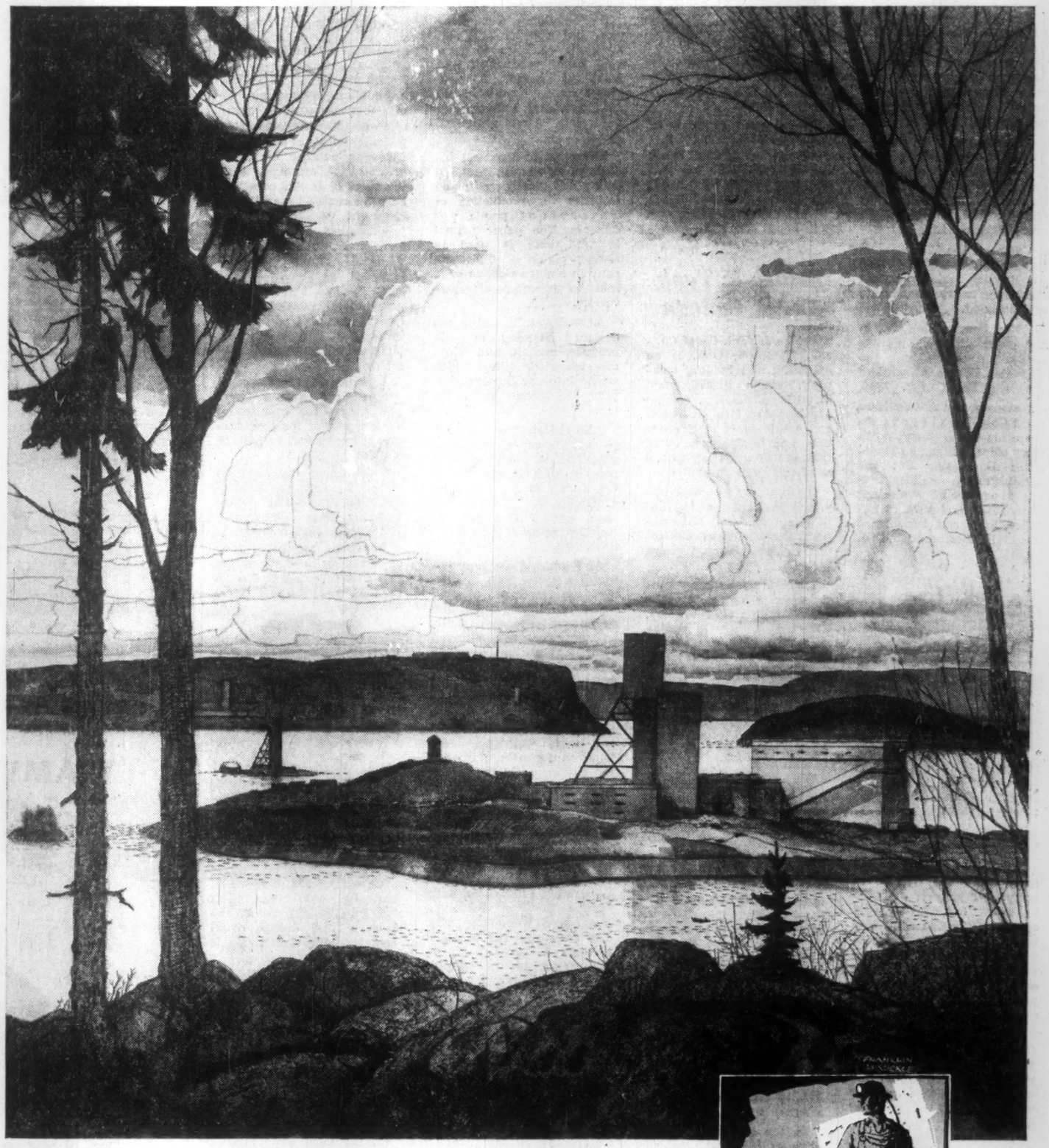

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FP reports on some of the major firms engaged in building or supplying materials or equipment for the construction industry. The list consists of companies in which there is, or has been, public investment interest.

Anglin-Norcross Corp.

Anglin-Norcross Corp. is engaged in the general contracting and building business. Accounts have not been published since 1956, two years after control was acquired by **Holland & Hannen and Cubitts Ltd.** of England.

Part of an extensive international organization, Anglin-Norcross subsidiaries include **Anglin-Norcross Quebec Ltd., Anglin-Norcross Ontario Ltd., Anglin-Norcross Maritime Ltd.**

Company has 50% interest in **Anglin-Atlas Ltd.**, formed to handle major projects combining heavy engineering and building.

Atlas Construction Co. is the other partner. This organization carried out the **Canadian British Aluminium** project at Baie Comeau, Que.

Among recent Anglin-Norcross Corp. contracts are those for C-I-L House, a 31-story office building on Montreal's Dorchester St.; the administrative building of the Montreal Protestant School Board, and the Providence Villa and Providence Hospital at Scarborough, Ont.

Bird Construction Co.

Bird Construction Co., Regina, is engaged in general building and road construction. Branches are located in Winnipeg, Moose Jaw, Edmonton, Calgary, Lethbridge and Port Arthur.

Net profit of $188,171 for 1958 was 45.2% higher than 1957's $129,598. Earnings per common share were $7.84 ($5.40 in 1957).

Operating costs were down 7%.

Purchases of capital equipment were the highest in company's history, amounting to $470,390. This included about $100,000 on additional equipment for a concrete paving contract in Winnipeg and $40,000 for equipment sent to the Inuvik project near the Artic Ocean. Sale of assets totaled $373,754.

Outstanding capitalization consists of 24,000 npv common shares. Dividends are being paid at the annual rate of $2.40 per share together with a bonus of 40c per share.

Brandram-Henderson Ltd.

Brandram-Henderson Ltd., Montreal, which manufactures a wide range of paint products, was acquired early this year by **Canadian Industries Ltd.** for $28.84 a share.

Previously 97% of the 50,000 authorized and issued npv shares were held by a private holding company, **Brandram-Henderson Holdings Ltd.**

Although sales forces of the two companies will continue to operate separately, manufacturing and research facilities are being co-ordinated.

Canada's oldest paint company, B-H has plants in Halifax, Montreal and Vancouver. C-I-L has two paint plants in Toronto and one in Montreal.

Warehouses are operated by B-H in Toronto and Fort William, Ont., Saint John, N.B., St. John's, Nfld., Winnipeg, Man., Red Deer, Alta., Sherbrooke, Quebec City, Trois Rivières and Rimouski, Que., and Kingston, Jamaica.

Net profit for year ended Sept. 30, 1959, was $56,056 against $89,806 in the preceding year. Sales were 7.7% higher but expenses were up due to "increased advertising costs including new signs, Carousel servicing and preliminary expenses for new warehouses in Kingston and Fort William."

The Carousel is the company's automatic color mixer, installed in dealer outlets on five-year leases.

Funded debt at Sept. 30 consisted of $436,500 4% first mortgage sinking fund bonds due 1961; $218,000 5% first mortgage sinking fund bonds due 1961; and $254,500 5% general mortgage sinking fund bonds due 1963.

Bridge & Tank Co. of Canada

Bridge & Tank Co. of Canada, Hamilton, Ont., is an operating and holding company, which directly and through subsidiaries, designs and fabricates steel structures and a variety of steel products, and is also engaged in the erection of structural steel and steel structures.

Company operates two plants in Hamilton and one in Winnipeg. The Winnipeg plant is operated by subsidiary, **Bridge & Tank Western Ltd.**

There are four other subsidiaries: **Rheem Canada Ltd.**, Hamilton (70% owned), **Vulcan Machinery & Equipment**, Winnipeg, **Ford-Smith Machinery Co.** and **Vulcan, Ford-Smith Ltd.**

Subsidiaries manufacture steel drums and water heaters, and sell machinery, ropeways and other heavy equipment as well as doing custom work.

Expansion plans for 1960 include a $2.5 million program at the main works of Hamilton Bridge. When completed, plant will be able to handle the heaviest types of fabricated steelwork and steel platework in Canada, President A. B. Hill reported. The Hamilton plant of Ford-Smith Machine Co. is to be expanded, and a second Canadian plant is to be constructed for Rheem Canada.

Unaudited net profit for 1959 is estimated at $950,000, equal to $2.45 per common share on the 347,898 shares outstanding at year-end. Net profit in 1958 totaled $1,009,069 or $3.29 per share on 275,153 common shares then issued.

In the six months ended June 30, 1959, net profit was $417,578, down 30.8% from $603,891 in the corresponding 1958 period.

Backlog of orders at the beginning of 1960 was larger than a year ago. President Hill anticipates continued and possibly improved profits this year.

In 1959, the management of **Western Copper Mills Ltd.** was taken over by Bridge & Tank (Western) Ltd. Western Copper, whose production commenced early in 1959, operates a mill on Annacis Island, B.C., for the manufacture of extruded copper and brass pipe, tubing, rods and shapes.

To provide additional financing for Western Copper, rights to purchase additional stock were offered to holders of Western Copper common stock. Bridge & Tank, who agreed to take up all unsubscribed shares at $4 a share, underwrote 149,732 shares.

Outstanding capitalization consists of 34,904 shares of $2.90 sinking fund preference stock, $50 par, and 347,898 npv common shares.

Funded debt at Dec. 31, 1958, totaled $2,097,500 5¼% first mortgage bonds, series A, due 1974, of the company and $315,500 4½% 20-year first mortgage bonds, due 1967, and $183,500 5½% 20-year first mortgage bonds, due 1973, of Bridge & Tank Western Ltd.

Dividends on the common stock are being paid at the annual rate of $1.20 per share.

Building Products Ltd.

Building Products Ltd. produces and markets a wide variety of materials for the construction trades, ranging from roofing and siding products for basic structural purposes through floor tile and decorative insulation.

At Pont Rouge, Que., company has a paper mill and auxiliary facilities to convert paper production into insulating board. A new board mill, completed in 1957, produces homogeneous decorative and acoustical board.

The plant at Montreal includes a paper mill, insulated siding mill, roofing mill and facilities for production of waterproof paints and cements. The paper manufactured here is used in roofing plants of the company in eastern Canada or is sold to other paper converters.

A roofing mill and a redesigned flooring mill to produce asphalt and vinyl asbestos floor tile, which went into production last year, are located at Hamilton.

Also at Hamilton, company plans to open a new fibre pipe-making plant in partnership with **Brown Co.** of the U.S. Brown has been producing the pipe for some time and will supply its technical knowledge in Hamilton.

At Winnipeg, company operates a paper mill to supply requirements of the roofing, insulating board and siding mills located there. Last year company improved equipment at the Winnipeg mill to a multi-paper standard.

At Edmonton, company plant consists of a roofing mill which supplies Alberta and British Columbia, and a paper mill producing dry felt for conversion in the roofing mill, as well as a variety of papers for use in the manufacture of containers, gypsum wallboards, etc.

Last year company acquired all outstanding shares of **Fibreboard Manufacturing Ltd.** and two fibreboard mills located at East Kildonan, Man., and Wabamun, Alta. The two mills are operated through Fibreboard Manufacturing Ltd. a wholly-owned subsidiary.

Total cost, including provision for completion of the Wabamun mill, improvements to both plants and additions to working capital, was approximately $1.6 million. This gives the company a strong position in the western market for fibreboard, including panels, sheathing and roof insulator. Decorative products may be added later.

Net income for 1959 rose to $1,590,028, equal to $3.29 per share. This was 18% above 1958.

In 1958, net profit was $1,345,135 ($2.78 per common share) compared with $1,699,219 ($3.52) in 1957.

Outstanding capitalization at Dec. 31, 1958, comprised 650,000 npv shares of which 483,384 were issued and outstanding.

Burrard Dry Dock Co.

Burrard Dry Dock Co., North Vancouver, B.C., is engaged in ship building and repairing and industrial engineering in Esquimalt, B.C.

Company operates a marine railway of 2,500 tons at Esquimalt and a dry dock at Vancouver with capacity of up to 15,000 tons, under subsidy from the federal government.

Subsidy payments amounted to $110,118 annually from 1948 to 1957, $110,127 in 1958 and $67,410 in 1959. Payment for 1960 will amount to $8,238. These subsidy payments are net of transfers by the federal government to a sinking fund for renewal of pontoons of the floating drydock. To Dec. 31, 1958, accummulated sinking fund totaled $133,902.

Yarrows Ltd., Esquimalt, is a wholly owned subsidiary, which owns a shipbuilding and ship repairing plant at Victoria.

Two other wholly owned subsidiaries **Burrard (Vancouver) Dry Dock Co.** and **Pacific Drydock Co.** are non-operating.

Consolidated net profit of $786,632 for 1958 was 23.4% lower than 1957's $1,026,972. Earnings per share were 80c per class B share after participation (($1.12 per share after participation in 1957).

Construction and conversion of naval vessels progressed on a reduced scale in 1958. Destroyer escorts HMCS Kootenay and HMCS Columbia were built and several minesweepers were refitted at the Esquimalt yard.

Construction started in 1959 for another destroyer escort of the improved "Restigouche" class, and company shared a contract for still another one.

A passenger-automobile ferry for the Mainland-Vancouver Island service was expected to be delivered early in 1960, and the company built two vessels for the Department of Transport, an icebreaker and a supply, buoy, search and rescue vessel.

As of the end of 1958, company did not see in prospect any orders for commercial vessels, except for construction of barges and a new type of steel fish boat.

Outstanding capitalization at Dec. 31, 1958, consisted of 250,000 npv cumulative participating class A shares, and 750,000 npv class B shares.

Dividends are being paid on the class A stock at the rate of 45c per share and on the class B, at the rate of 15c per share.

Can. Cement Co.

Canada Cement Co., Montreal, largest Canadian producer of Portland cement, completed 50 years of operation in August.

It has eight producing plants, located at Montreal and Hull, Que., Havelock, N.B., Belleville, Port Colborne and Woodstock, Ont., Exshaw, Alta., and Fort Whyte, Man. It has a clinker-grinding plant at Edmonton.

Capacity is 24 million bbl. annually, with Montreal's 7.5 million bbl. plant the largest. Total capacity of all cement plants in Canada is 48 million bbl.

Storage warehouses and packing units at Toronto, Windsor, Quebec City, and Chatham are serviced by two self-unloading vessels. Other units are at North Bay, Sudbury and Fort William, Ont., and Saskatoon, Sask.

Company owns Canada Cement building, a 10-story office building in Montreal. During fiscal 1959, Canada Cement spent $12.1 million on acquisition of substantial interests in **Standard Paving & Materials Ltd.** and other unidentified companies in the distribution field.

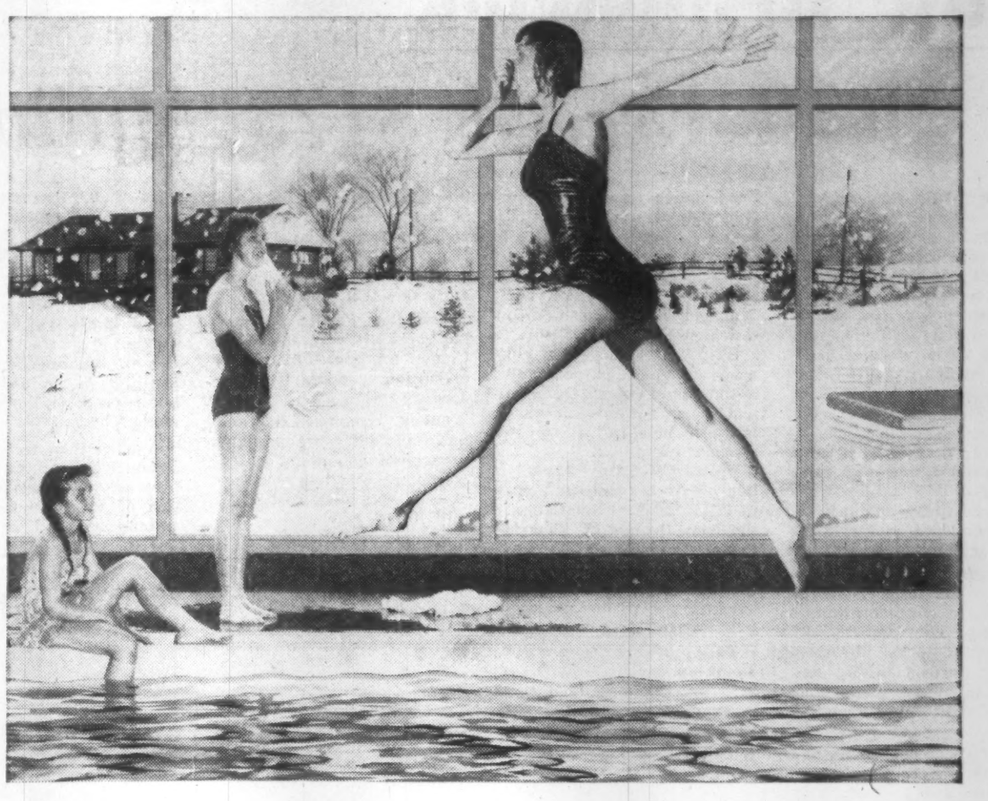
Capital expenditures for new plant and equipment in year ended Nov. 30, 1959, were $2,603,148. This was lower than forecast as several projects were not quite completed by year end. Including a carry-over on this account of some $400,000 capital expenditures for the current year are estimated at $2,750,000.

Net earnings amounted to $7,011,305, equal to $2.54 a common share, against $7,215,183 or $2.60 a share, in the preceding year.

Estimates for 1960 indicate a volume of construction slightly higher than 1959. On that basis, company says cement demand should be sufficient to enable its plants to operate efficiently, though at somewhat below capacity.

Funded debt at close of fiscal year consisted of $19 million 3¾% debentures, 1955 series, and $14,250,000 5¼% debentures, 1956 series.

Outstanding are 700,000 cumulative redeemable preference shares ($20 par) carrying annual dividends of $1.30. Common share capital consists of 2.4 million npv shares.



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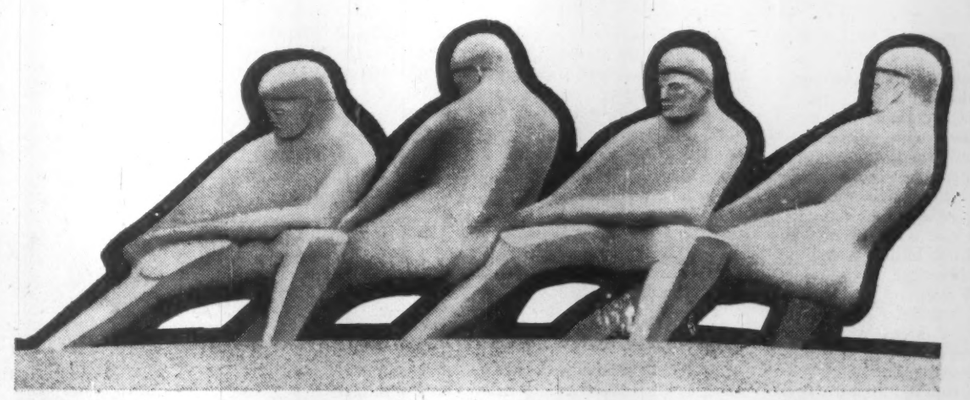

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Can. Crushed & Cut Stone Ltd.

Canada Crushed and Cut Stone Ltd., Hamilton, Ont., is one of the largest processors of crushed stone, metallurgical stone, agricultural limestone and high-grade dolomite. Plants are at Dundas, Hagersville and Niagara Falls, Ont., and a warehouse is located at Hamilton. Company owns 2,000 acres of quarry properties.

Control is held by **Steetley of Canada,** which is a subsidiary of **Steetley Co.,** England.

A rotary kiln plant on the dolomite quarry has an annual capacity of 60,000 tons.

Wholly owned subsidiary, **Queenston Quarries Ltd.,** owns and operates limestone quarries near Niagara Falls, from which Queenston limestone is obtained. The crushing and screening plant was rebuilt and enlarged in 1959 at an estimated cost of $350,000.

Another subsidiary, **Ritchie Cut Stone Co.,** operates a stone cutting plant at New Toronto, Ont. In 1957, the Toronto operations of the cut stone division were consolidated at the Ritchie Cut Stone plant.

National Slag Ltd., in which company holds one third interest, processes blast furnace slag from steel mills.

Net profit for the six months ended June 30, 1959, was $95,782 compared with $194,852 for the first half of 1958. This was the equivalent of 46c per share (96c per share in 1958). President D. H. Henderson attributed decline in the first half to depressed condition of the cut stone industry. He further reported that business in second half 1959 is "definitely up over first half of this year".

Capital expenditures in 1958 totaled $428,083, for plant, equipment and quarry property.

All 6% preferred stock was redeemed May 1, 1959, at $105.

Following redemption, capitalization consisted of 190,000 npv common shares. Funded debt totaled $783,500 and was made up of $421,500 5% first mortgage sinking fund bonds, due 1971, and $362,000 5½% general mortgage sinking fund debentures, due 1976.

Can. Flooring Co.

Canada Flooring Co., Mount Royal, Que., specializes in hardwood flooring of all kinds and in custom kiln drying.

Company has a monthly capacity of 2.5 million ft. of flooring and 3.5 million ft. of custom drying.

In 1959 a new kiln was added giving company an extra million ft. drying capacity and raising total number of kilns to 14. Cost of the kiln, including building, was about $150,000.

Since 1958 company has also been producing flooring blocks (wood tile). Capacity at present is 15,000 sq. ft. daily. Tile sales are reported to be good.

Company views with some concern decline in residential housing starts in Canada since late last year. Because of the drop, company is not planning any additional kiln capacity this year. In recent years, policy had been to add a new kiln each year.

Net profit for the year ended Oct. 31, 1959, was $133,751, down slightly from $139,254 in the previous year. Company notes, however, both sales and profit before income taxes in 1959 were higher than in 1958. The lower net is attributed to higher taxes due to an adjustment in company's reserve for bad debts.

Outstanding capitalization Oct. 31, 1959, comprised $210,000 3½% - to - 5% first mortgage bonds, due 1959-66; $45,000 4% serial debentures, due 1959-65, $150,000 6% serials, due 1967; 40,640 cumulative convertible Class A shares; 40,960 ($1 par) Class B shares.

During 1959, ten Class A shares were converted into a like number of B.

Can. Iron Foundries Ltd.

Canada Iron Foundries Ltd., Montreal, directly and through its subsidiaries manufactures machinery and equipment for the paper industry, rolling mills, for steel, aluminum and brass industries, general castings, car wheels, brake shoes, cast-iron pipe, concrete products and other types of machinery and equipment including

ONE CORNER of the block-square site of Hydro-Quebec's new sub-station and post office building in Montreal.

marine engines, mining, chemical and textile equipment.

Company's subsidiaries include **Western Bridge & Steel Fabricators Ltd.,** Vancouver; **C. W. Carry, Ltd.,** Edmonton, **Calgary Structural Steel,** Calgary, **Dominion Structural Steel Ltd., Tamper Ltd., Railway & Power Engineering Ltd., Paper Mill Equipment Ltd., Paper Machinery Ltd., Pressure Pipe Co. of Canada** and **C. M. Lovsted (Canada) Ltd.**

Disher Steel Construction Co., acquired in 1955, is operated as a division of Dominion Structural Steel.

For 1959, company will show only a "very small profit" due to substantial losses on structural steel operations, president F. T. Rahilly says.

(In 1958 consolidated net profit was $2,454,983 or $2.84 per common share. Results for 1959 are not expected to be released until early April.)

Losses incurred by Dominion Structural Steel have resulted in an extensive reorganization of that subsidiary. It is expected to be operating at a profit by the end of this year.

While Dominion Structural sustained losses in 1959, all other divisions showed profits, company says.

Outlook for 1960 is termed as "very good" by the company. Short of a major business recession, volume of business anticipated during the year is substantially ahead of 1959 levels.

Company notes that prices in the structural steel lines—weak for the past 18 months—have strengthened considerably in the face of increased demand.

These and other factors are expected to contribute to an improved earnings picture in 1960, company says.

In the structural steel field, company and **Dominion Bridge Co.,** are sharing a 40,000-ton steel work order for the **Webb & Knapp (Canada) Ltd.** Place Ville Marie project in Montreal.

In addition, company has obtained a $5 million order to supply 28,000 tons of cast iron liners, two large and four small tunnel shields for **Toronto Transit Commission's** east-west subway.

In order to manufacture the tunnel liners, a job which will involve about 20,000 castings, Canada Iron has re-equipped one of its Toronto plants. Further business in this line is anticipated from mining and similar projects.

With improvement of the primary steel industry, company's ingot mold business in 1959 was considerably higher than in previous years. A good volume of orders for ingot molds is anticipated through most of 1960.

This year two new railway tampers developed by company's subsidiary, Tamper Ltd., are expected to start making significant contributions to earnings.

The machines are used by railroads to maintain roadbeds.

During 1959 Pressure Pipe Co. of Canada started manufacture of prestressed double Tee concrete slabs. Single Tee slabs will be added to the line this year.

The slabs form an integral part of a building's structure, at the same time serving as either roof or floor.

At Dec. 31, 1958, outstanding capitalization of Canada Iron comprised $700,000 4% serial debentures, Series A, due Dec. 15, 1959-60; $3.5 million 4¾% sinking fund debentures, Series A, due Dec. 15, 1965; $1,582,000 5¾% sinking fund debentures, Series B, due April 15, 1969; $7,125,000 6¼% sinking fund debentures, Series C, due Oct. 15, 1977; $4,830,700 4¼% cumulative redeemable preferred shares ($100 par); 793,218 common shares ($10 par).

To Sept. 30, 1959, 5,552 preferred shares had been converted into 16,656 common, raising number of common outstanding to 809,874 and reducing preferred outstanding to 42,755.

Cdn. Dredge & Dock Co.

Canadian Dredge & Dock Co., Toronto, Ont., is engaged in general dredging and marine work on the Great Lakes-St. Lawrence River waterway and the Atlantic coast. Construction and improvement of harbors, canals, breakwaters and channel facilities are undertaken as well as other general construction work and repairs.

Floating plant consists of several units, comprising hydraulic, dipper, and clamshell dredges, steam and diesel tugs, drills, derricks, submarine rock drills, scows, and general contractors' equipment.

A dry dock and shops for marine construction and repairs are maintained at Kingston, Ont.

Dredging plant operated at full capacity during 1959 navigation season. Earnings for year ending April 30, 1960, are expected to be approximately the same as previous year.

Company is reported to have sufficient construction work on hand for the balance of the fiscal year, but it is not expected that the year-end order backlog will be as large as last year.

Capital expenditures for 1958-59 totaled $311,569.

Consolidated net profit of $815,278 for year ended April 30, 1959, was little changed from previous fiscal year's $810,998. Earnings per share amounted to $2.08 ($2.07 the previous year).

Part of company's holdings of preferred stock of **J. P. Porter Co.** was redeemed, reducing the investment in this company carried on the books to $200,000. As at Feb. 28, 1959, company's equity in this company was estimated at $1,164,000.

Outstanding capitalization consists of 588,000 npv common shares. Common stock was split in July, 1959, on a 1½-for-1 basis.

Initial dividend on the new stock of 50c per share was paid Nov. 3, 1959.

Canadian Ingersoll-Rand

Canadian Ingersoll - Rand Co., Montreal, makes air and gas compressors, rock drills, air tools, mine hoists, centrifugal and vacuum pumps, condensers, air conditioning and refrigeration equipment, and machinery for pulp and paper, mining, tunneling, quarrying, oil and gas production, transmission and distribution.

Plant is at Sherbrooke, Que. Majority of company's shares are held by **Ingersoll-Rand Co.,** New York.

Company controls all Canadian rights to patents of Ingersoll - Rand Co., **A. S. Cameron Steam Pump Works, Bird Machine Co., Centrifugal Engineering Patents Corp.** and some other firms.

Canadian Ingersoll - Rand has its own design and engineering department. A new line of screening equipment for the pulp and paper industry, introduced in 1958, now is well established, with "considerable sales". A new portable barker is said to have done well. Company also exports barking drums to the U. S.

Canadian Ingersoll - Rand says earnings have been uptrending since hitting a low point late in 1958. Net profit for 1959 is expected to be a little lower than 1958's $1,344,616 ($2.27 per share).

Incoming business recently has been brisk and the outlook is reported as excellent. Much business should be available from large projects now in planning or just starting. These include big development of iron ore in Quebec-Labrador, large-scale power development especially in Quebec, new chemical plants, large roadbuilding programs, etc. A decision to allow substantial gas export from Canada would open up further new business possibilities.

Full financial details for 1959 aren't yet available. Company last year put the common on an indicated annual dividend rate of $1.

Capitalization is 1.2 million npv common shares authorized, of which 591,474 are issued and outstanding.

Cdn. Vickers Ltd.

Canadian Vickers Ltd., Montreal, owns directly and through subsidiaries a floating drydock, and shipbuilding and repairing plants at Montreal and Lauzon, Que.

It also manufactures a wide range of heavy engineering and industrial machinery and equipment for the pulp and paper, mining, chemical, oil refining, brewing, food processing and other industries.

Included are such items as steam boilers, heat exchangers and specialized machinery such as is required for operation of the St. Lawrence seaway locks.

Order backlog at present is termed "good."

On the marine side, company now has more work on the books than a year ago.

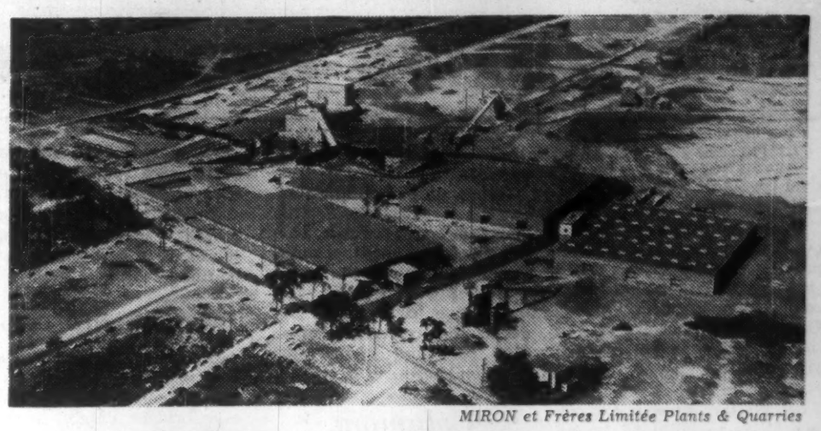
This includes two 26,000-ton upper lakers being built for **Scott Misener Steamships Ltd.,** a cargo passenger vessel being built for the Canadian Government, and a destroyer escort for Royal Canadian Navy.

One of the upper lakers is for completion this summer; the other will be delivered early in 1961.

The cargo passenger vessel—one of two Canada is giving to the West Indies Federation—will be commissioned early in 1961.

Hull of the destroyer—one of six repeat Restigouche class vessels — will be laun-

(Continued on page 88)



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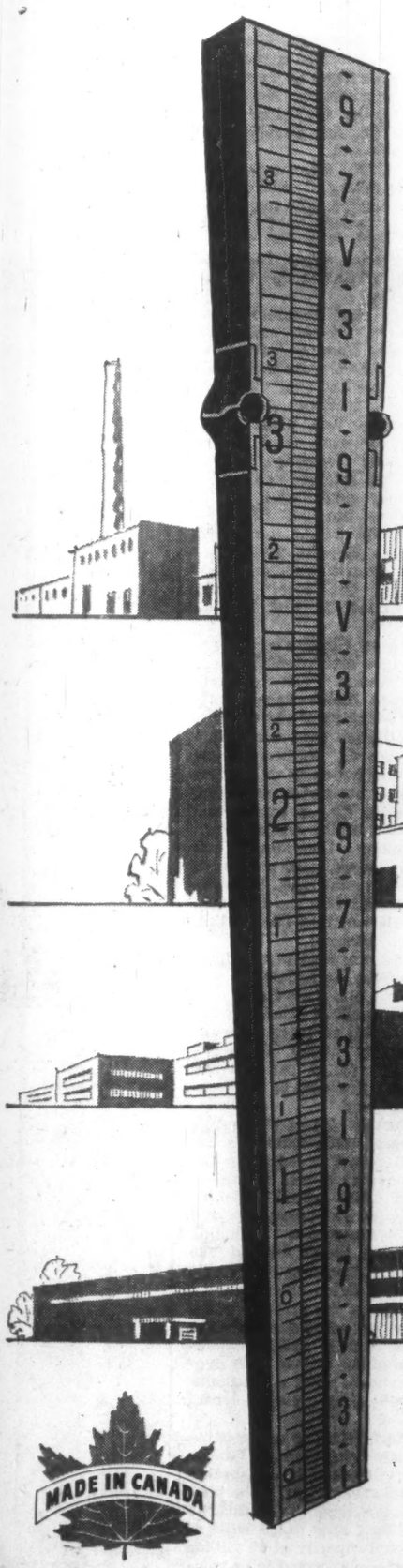
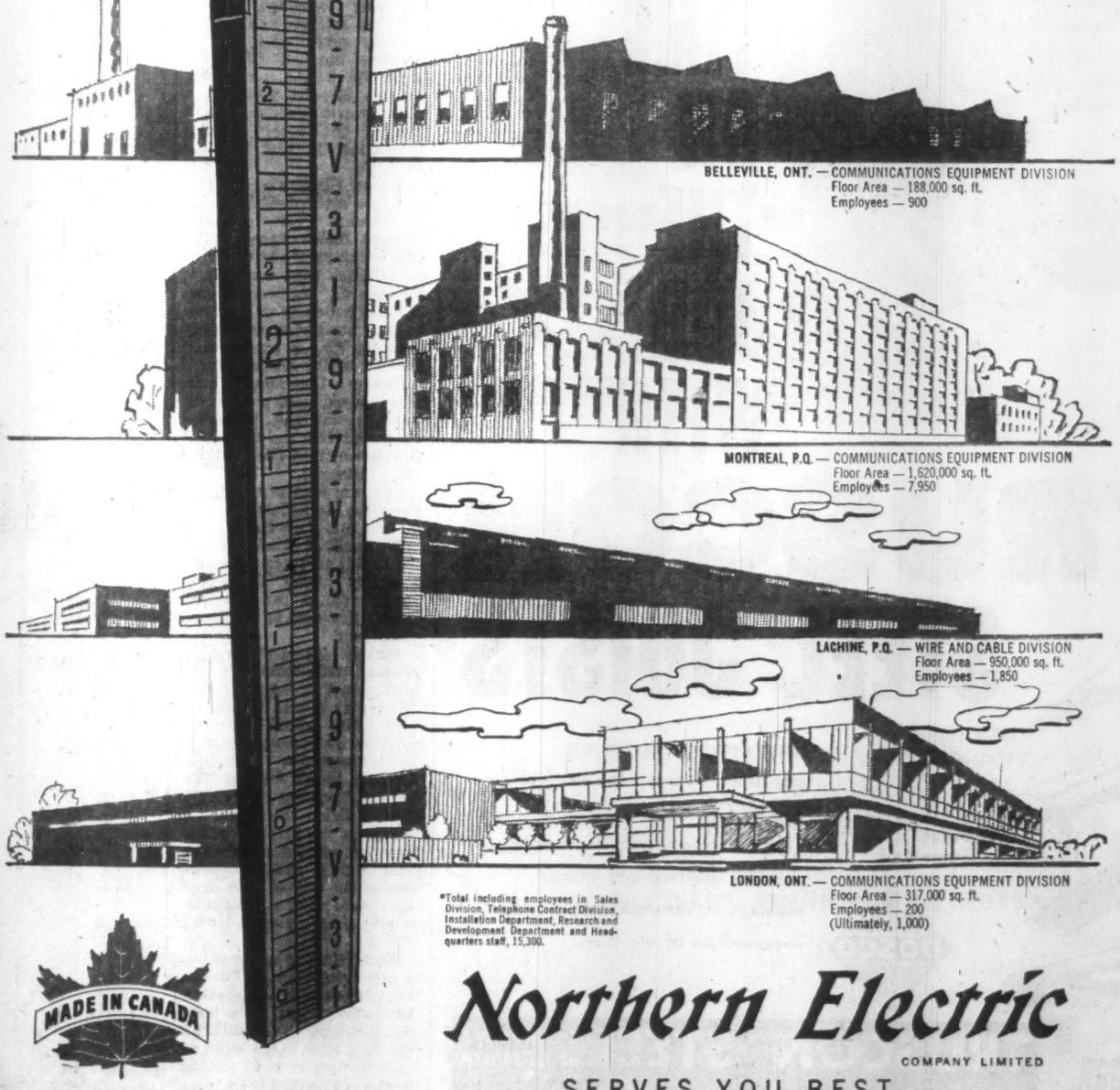


A STAKE IN CANADA

Northern's manufacturing plants, warehouses and offices in many cities across the Dominion represent a great investment in Canada. This brings to each community revenue in taxes and the purchasing power of Northern Electric employees.* This investment continues to grow with the growth of the Company.

Northern Electric designs, manufactures and installs a large proportion of Canada's telephone communication systems and equipment. This experience is invaluable in the development of materials and systems for Canada's Defence Communications. Northern Electric also produces all types of electrical wires and cables for communication and power transmission.

At Northern Electric, product research and development never stops and advances are continually being made.



BELLEVILLE, ONT. — COMMUNICATIONS EQUIPMENT DIVISION
Floor Area — 188,000 sq. ft.
Employees — 900

MONTREAL, P.Q. — COMMUNICATIONS EQUIPMENT DIVISION
Floor Area — 1,620,000 sq. ft.
Employees — 7,950

LACHINE, P.Q. — WIRE AND CABLE DIVISION
Floor Area — 950,000 sq. ft.
Employees — 1,850

LONDON, ONT. — COMMUNICATIONS EQUIPMENT DIVISION
Floor Area — 317,000 sq. ft.
Employees — 200
(Ultimately, 1,000)

*Total including employees in Sales Division, Telephone Contract Division, Installation Department, Research and Development Department and Headquarters staff, 15,300.

MADE IN CANADA

Northern Electric
COMPANY LIMITED

SERVES YOU BEST

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They Help Build Canada

CONTINUED FROM P. 87

ched this summer. Fitting out will take considerable time.

In the industrial engineering field business is also improving though prices are still weak due to intense competition, company says. Order backlog, however, is at present a little higher than a year earlier.

Company has a contract from **Western Electric Co.** of the U. S. to build 60 large radar antennas for the U. S. Air Force. Also under construction are several large hydraulic presses, assorted oil refinery equipment, and some crushers for the mining industry.

Recently, company obtained a contract from **Quebec Hydro** for sluice gates at the Carillon hydro project on the Ottawa River.

Company declines to give indication of financial results in 1959. Annual report is expected in March.

In the year ended Nov. 30, 1958, net profit was $1,085,289, equivalent to $1.99 per common share. This compares with net profit of $1,766,756 or $3.24 per share in the previous year.

At Nov. 30, 1958, capitalization comprised 600,000 npv common shares authorized, of which 545,000 were outstanding.

Geo. T. Davie & Sons Ltd., Lauzon, Que., a shipbuilding and repairing company, is a wholly owned subsidiary.

Ciment Quebec Inc.

Ciment Quebec Inc. manufactures portland cement at a plant in St. Basile, Que. Capacity is 800,000 bbl. annually. Company owns a cement stone deposit said to have a potential of 1,975 million tons.

Net profit for year ended Nov. 30, 1958, was $9,061, compared with $244 for precedin · year.

Earnings per 6% cumulative participating preferred share were 45c in the 1958 period. There were no earnings available for the 5% preferred or the common. No dividends have been paid since date of issue. Company was formed in 1950.

Outstanding capitalization consists of $720,000 6% first mortgage bonds series A; 20,000 6% cumulative participating redeemable preferred shares, $50 par; 5,457 5% cumulative participating redeemable preferred shares, $100 par; and 70,000 npv common shares.

Columbia Gypsum Co.

Columbia Gypsum Co., Vancouver, was incorporated in 1954 to acquire **Columbia Gypsum Products Inc.**, a Washington corporation. Company owns gypsum claims in British Columbia, held for future development, estimated to contain 20 million tons of gypsum.

Spokane plant and site and certain deposits were sold to **Western Gypsum Products**, Winnipeg, in July, 1957.

Outstanding capitalization consists of 3,159,840 common shares, $1 par. Prior to Dec. 31, 1958, 1,896,002 shares were designated as class B stock and restricted as to dividends and principal.

Corduits National Co.

Conduits National Co., Toronto, manufactures rigid electrical conduits, elbows, couplings, etc., for use in industrial plants, offices, houses, churches and steamboats.

Company is sole Canadian representative for Wiremold surface raceways and fittings and uses the trade names of Xceladuct, Galvaduct and Loricated.

Plants are located in Toronto and Montreal, and agencies in principal cities of the western provinces. Its products are distributed throughout the country by jobbers.

Annual report is not yet available but company official reports that earnings for fiscal year ended Nov. 30, 1959, were "slightly better" than in the previous year when net profit was $208,904.

For year ended Nov. 30, 1958, earnings per common share were $1.30, compared with $1.31 the year before.

Outstanding capitalization consists of 160,800 common shares, $1 par. Company has no funded debt.

Dom. Bridge Co.

Dominion Bridge Co., Montreal, fabricates and erects steel, iron and aluminum bridges, cranes, marine boilers, steam turbines and structural steel of all kinds.

Through subsidiaries and controlled units, company manufactures papermaking and hydraulic machines, tractor parts, steam shovels, coal mine, grain elevator and oil well equipment and miscellaneous products.

In the midst of a $25 million expansion program, company last year undertook an internal management reorganization which is expected to increase efficiency and lower costs. Under the new setup, operational control is vested in four regions.

Eastern region comprises company's largest plant (Lachine, Que.) and smaller plants at Longue Point, Montreal, and Amherst, N.S.

Ontario region has two large plants at Toronto, one at Sault Ste. Marie and one at Ottawa. A new structural shop in Mount Dennis was put into operation during the year.

Central region consists of the Dominion Bridge plant at Winnipeg, two subsidiaries, **Manitoba Bridge & Engineering Works Ltd.** and **Manitoba Rolling Mill Co.**, and the new steel fabricating plant and warehouse at Regina.

Western region consists of company's second largest plant (Burnaby, B.C.), a smaller plant in Vancouver and plants at Edmonton and Calgary.

Company also formed three country-wide products divisions—warehouse, boiler and mechanical — each headed by a general manager and an engineering services group to check designs and specifications of all unusual structures, a marketing services group and a manufacturing services group.

Wholly-owned subsidiaries are **Robb Engineering Works**, Amherst, and the two Manitoba companies. Associated companies are **Dominion Engineering Works**, Montreal, and **Eastern Canada Steel & Iron Works**, Quebec.

Consolidated net profit for year ended Oct. 31, 1959, was $4,468,273, equal to $1.74 a common share, against $6,260,591, or $2.44 a share, in the preceding year.

Sales were up almost 10% from $113.1 million to $123.3 million, reflecting completion of large orders in prior years. Value of orders booked in 1959 was up 30% over 1958. Company found it necessary to take business at lower prices to maintain its customary share of the market.

Orders on hand at beginning of 1960 were 25% above a year ago.

In 1958-59 fiscal period capital expenditures were $2,641,557. Authorized but still unspent at Oct. 31, 1959, was $1,108,679.

Company has no funded debt. Capitalization consists of 2,569,755 npv common shares.

Dom. Tar & Chemical

Dominion Tar & Chemical Co. is a major producer of many building products. It also produces numerous chemicals, a variety of household products and is in the pulp and paper field.

Company operates directly and through subsidiaries.

In the building material field, **Murray-Brantford Ltd.** makes and distributes asphalt roofing, insulation and other building materials. The company was formed a year ago through merger of three former subsidiaries: **Brantford Roofing Co., Alexander Murray & Co.**, and **Canada Roof Products Ltd.**

In 1958 company's two brick-making subsidiaries were merged into one company, **Cooksville - Laprairie Brick Ltd.** The two former subsidiaries were **Laprairie Brick & Tile Inc.** and **Cooksville Co.**

Last year Dominion Tar acquired all of assets of **Gypsum, Lime & Alabastine, Canada, Ltd.** (now **Kamic Investments Ltd.**) on the basis of two common shares of Dominion Tar plus $14.50 cash for each GLA share. Company formerly had a minority interest in GLA.

Other subsidiaries in the building products field include **Siporex Ltd.**, into which **Precast Haydite Ltd.** (another former subsidiary) was merged last year; **Canada Creosoting Co.** and **No-Co-Rode Co.**

Precast Haydite now operates as a division of Siporex.

Dominion Tar controls **Howard Smith Paper Mills Ltd.** which itself and through subsidiaries produces building boards, softboards and building papers as well as fine papers, newsprint and pulp. **Arborite Co.** is among the Howard Smith subsidiaries.

Among Dominion Tar's other subsidiaries are **Javex Co., Sifto Salt Ltd., Marvello Chemicals Ltd.** and **Chemical Developments of Canada Ltd.** (51% interest).

Last year former subsidiary **Dominion Rock Salt Co.** was merged into Sifto Salt.

Net profit of Dominion Tar for 1959 is expected to be appreciably higher than $7,304,497 ($1.40 per common share) attained in the previous year.

Further details will not be released until company's annual report is issued in the latter part of this month.

In 1959 capital expenditures of Dominion Tar and its subsidiaries including Howard Smith totaled $29 million. Spending of $20 million is slated this year.

Among the projects under way or scheduled for this year is a $4 million expansion of the former GLA gypsum board plant at Caledonia. It will double plant's capacity.

Early start is expected on a new brick plant at Ottawa for **Cooksville - Laprairie Brick.** The plant, to be built in two stages, will cost $2.5 million. First stage with an annual capacity of 25 million bricks is expected to be completed in 1961. A second, similar-sized stage will be built later.

Siporex's Haydite operation at Toronto is being expanded. Additions to plant, scheduled to be complete this year, will increase lightweight aggregate capacity by 50%.

In Prince George, B.C., Canada Creosoting is building a new wood preserving plant. Cost is $750,000 and the project is to be complete this year.

Javex Co. is building a new plant in Edmonton at a cost of $250,000. It is to be complete early this year. Production will include bleaches, detergents and laundry rinses.

Some major capital projects at Howard Smith which were under construction last year are just now being completed.

They include No. 6 paper machine with annual capacity of 40,000 tons which cost $12 million. The new machine is just now going into operation.

Also to be completed early this year is conversion of a part of Howard Smith's Cornwall, Ont., plant capacity to production of kraft pulp. The conversion will cost about $1 million.

At Calgary, Dominion Tar is enlarging a gypsum board plant at a cost of $2 million. The project is to be complete in the first quarter of this year.

At June 30, 1959, outstanding capitalization of Dominion Tar comprised $3.6 million 3½% first mortgage sinking fund bonds, Series B, due Aug. 1, 1970; $5 million 5% sinking fund debentures, Series A, due June 1, 1965; $22.5 million 5¼% Series A sinking fund debentures due June 1, 1978; 300,000 $1 cumulative redeemable preferred shares ($23.50 par); and 6,782,232 npv common shares.

Edmonton Concrete Block

Edmonton Concrete Block Co., Edmonton, manufactures concrete blocks and lightweight aggregate for the construction trade. Capacity is approximately 20,000 8-in. concrete blocks per day.

Autoclaving facilities, for high pressure steam curing of concrete products, were put into operation in the 1958-59 fiscal year. They are improving quality of the company's product.

Spectra-Glaze division has a capacity of 800 blocks per day and facilities were further expanded during 1959.

Red-E-Crete division, whose operations commenced July, 1958, markets packaged concrete mixes.

Company owns the Alberta agency for Lithitax paint.

Majority interest has been acquired in **Wye Road Sand & Gravel Ltd.**, to enable the company to control more of its raw materials. Sufficient raw materials are available from this pit to allow sale of well-graded sand.

Net profit of $107,532 for year ended March 31, 1959 (latest available) was 16.7% lower than previous year's $129,043. Earnings per share were 47c (56c in 1957-58 fiscal year).

Dividends are being paid at the annual rate of 16c per share. Bonus of 4c per share was paid July 31, 1959.

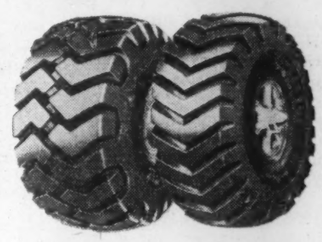
Outstanding capitalization consisted of 230,000 npv common shares.

Funded debt of $193,500 at March 31, 1959, was made up of 6% first mortgage sinking fund bonds, series A, due 1969.

Stock control is held by **Borneo Co.**, London, England.

Firestone Rock Grips lead all tire choices with tread designs that travel any terrain!

Firestone Tubeless Rock Grips are making big news wherever heavy equipment rolls. Two great tread designs match toughness with traction to move your heavyweights over any course. Rock Grip construction eliminates your need to change tires to match terrain. It delivers the full flotation you need for sand and soft stuff. It also has the armored grip necessary to negotiate rock-hard runs over broken shale. Safety-Tensioned *Gum-Dipped*® nylon bodies and cut-resistant treads make these Firestones first choice tires with men who move equipment. Your Firestone Sales Engineer can demonstrate why you'll make them your first choice, too. Contact him today—through your local Firestone Dealer or Store.



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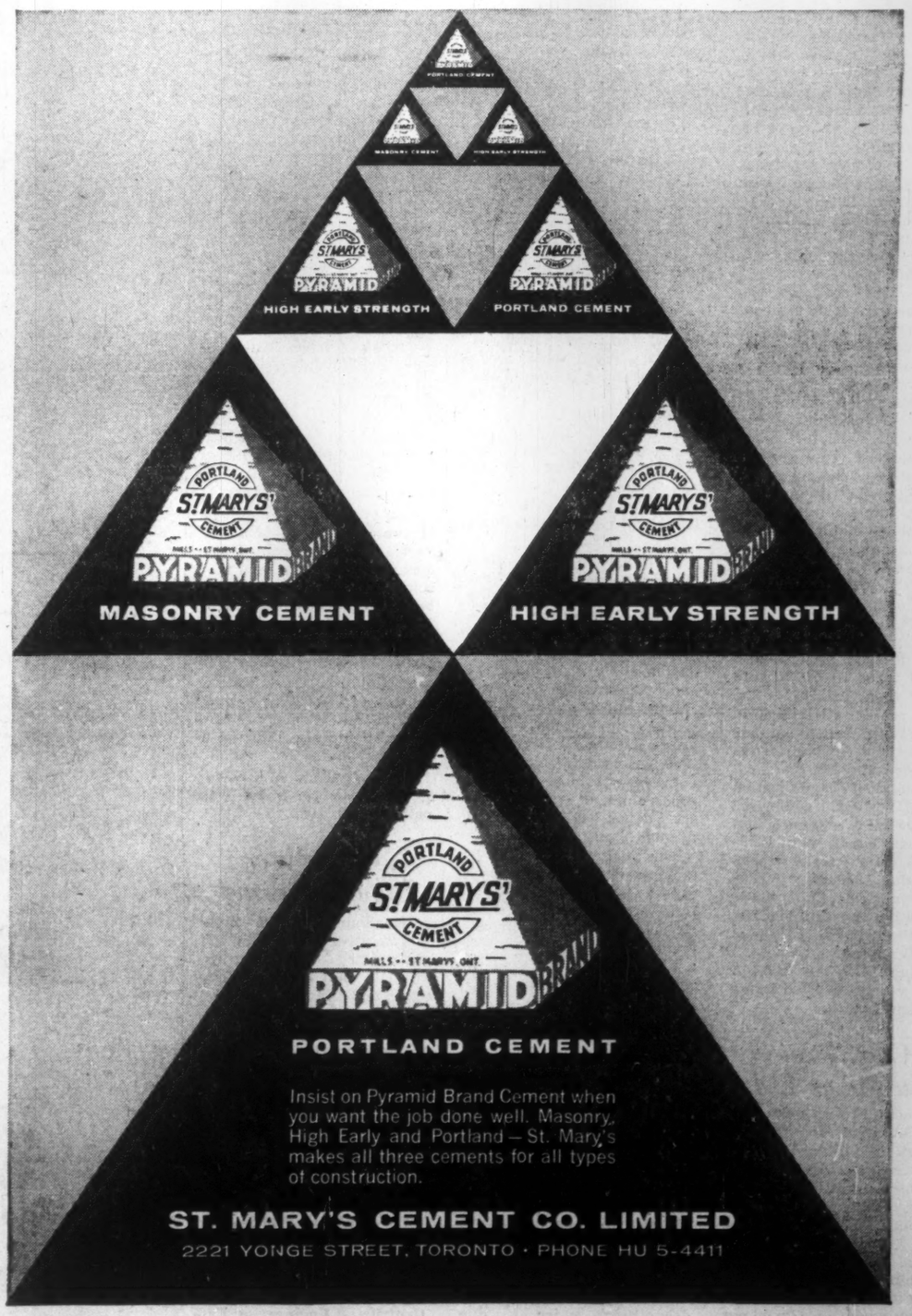

They Help Build Canada

Foundation Co. of Canada

Foundation Co. of Canada does extensive business in Canada and abroad through its building, engineering and marine divisions, and through subsidiaries.

It is in all major branches of construction, offers engineering services in such fields as harbor development, river control, power development. It also does marine salvage in the Atlantic and Gulf of St. Lawrence.

Company tackles projects as diverse as the rebuilding of St. John's harbor and construction of the Stratford Festival theatre. Contracted profit on the Stratford job was $1. Foundation is now working on Canada's largest commercial development, the $75 million Place Ville Marie in Montreal, for **Webb & Knapp (Canada) Ltd.**

Subsidiaries include **Foundation Co. of Ontario, Foundation Co. of Quebec, Foundation Overseas Ltd., Foundation of Canada Engineering Corp., Foundation Maritime Ltd., Geocon Ltd., A. D. Ross & Co.,** (electrical engineers and contractors) **Construction Equipment Co., National Materials Handling Ltd., Atlantic Tug & Equipment Co.** and **Constructora Dominico-Canadiense,** which offers construction and engineering services in the Dominican Republic.

Foundation has 50% interest in **Chemiebau Canada Ltd.** and 25% in **United Waterways Constructors Ltd.**

Last year's profit has not yet been announced. However, it is understood that company was busy in all divisions.

Consolidated net profit in 1958 was $1,796,547 ($1.53 per common share) compared with $1,828,467 (equivalent of $1.56) in 1957. Common was split two-for-one in mid-1958.

Proceeds of a recent $4 million 6¾% sinking fund debenture issue, placed privately, have been used to reduce outstanding bank loans. Other funded debt consists of $3.4 million 4½% sinking fund debentures, Series A, due 1976, and $540,000 6% serial debentures, 1960-68.

At June 30, 1959, there were 1,182,441 npv common shares issued and outstanding.

General Paint Corp.

General Paint Corp. of Canada, Vancouver, manufactures and sells a complete line of paints, varnishes and lacquers from British Columbia to the Great Lakes.

Products for homes and commercial buildings are marketed under the names of Monamel and Monaseal, and the industrial products are sold under the name of Invincinite.

Branch stores are operated in Vancouver, Victoria, New Westminster, Edmonton, Calgary and Regina. Products are distributed directly to the trade and public rather than through jobbers.

Company reported that the Mona-matic colorant dispensing machine introduced during 1959 was well received by dealers.

Company installed equipment to make alkyds and synthetic resins in 1956.

Net profit of $149,286 for year ended Oct. 31, 1959, was 39.7% higher than previous fiscal year's $106,876.

Earnings per class A share equaled $10.04 ($6.68 per share in year ended Oct. 31, 1958) and $2.31 ($1.64) per class B share.

Outstanding capitalization at Oct. 31, 1959, consisted of 14,865 class A npv shares, and 60,385 class B npv shares.

Funded debt totaled $256,000 made up of 5½% first mortgage sinking fund bonds, series A, due 1969.

Imperial Flo-Glaze Paints

Imperial Flo-Glaze Paints Ltd., Toronto, manufactures varnishes, lacquers, enamels, paints, dry colors and protective coatings. Trade names are "Flo-Glaze" and "Imperial".

Company's plant is in Toronto, and a warehouse is maintained in Montreal.

Imperial Paint Co., in which the company owns 58% interest, handles the distribution of trade lines in British Columbia.

Another controlled subsidiary, **Spectrum Co.** in British Columbia, manufactures paint products.

Distribution in Ontario is made through the company's own sales organization. In Quebec, an intensive sale effort was started at the beginning of 1959.

Net profit of $201,813 for year ended Aug. 31, 1959, was 17.9% lower than previous fiscal year's $245,825. Earnings per common share were $3.10 ($4.13).

Sales increased but not sufficiently to offset higher operating expenses. Stiffer competition, President G. C. McEwen said, particularly in the industrial field, reduced gross margins.

Preferred stock was retired in January, 1959. All but 28 shares were converted into common stock.

Outstanding capitalization at Aug. 31, 1959 consisted of 65,154 npv common shares. Annual dividends were increased to $1.50 per share from $1.30 and a bonus of 10c per share was paid Dec. 31, 1959.

Inland Cement

Inland Cement Co., Edmonton, manufactures and markets portland cement as well as oil well cement, sulphate resistant cement and other related products.

Plants are at Edmonton and Regina. A third kiln at the Edmonton plant and additional facilities at Regina, to be completed this year, will increase capacity to about 4.5 million barrels.

In addition to the kilns, plant includes raw material storage and blending hall, a raw material grinding and mixing unit, slurry tanks, a cement clinker and crushing and grinding unit, cement silos, bagging and packing house and shipping facilities.

A limestone deposit has been acquired about 200 miles from Edmonton, near Cadomin, Alta.

Rights to the deposit are held under Alberta Government lease covering an area of 540 acres and running until 1975 and renewable for three further periods of 21 years. Minimum annual royalty is $675.

Estimates suggest a 50-year supply of limestone. Fifteen million tons are indicated, and a further eight million tons can probably be developed.

Virtually unlimited quantities of suitable clay and sand are available in the Edmonton area, including large deposits on the plant site.

Iron oxide is available at Fort Saskatchewan.

Wholly owned subsidiary, **Saskatchewan Cement Co.,** purchased the Regina plant in 1957 from **Saskatchewan Cement Corp.** Supplies of raw materials are drawn from limestone quarry at Mafeking, Man.

President W. L. Forster reports that 1959 sales and earnings were within 1% of the 1958 figures, despite exceptionally bad weather in the last half of the year.

Net profit for 1958 totaled $1,645,273 compared with $379,993 for 1957. Earnings per common share were 54c before participation and 14.6c after participation in 1958.

An initial dividend of 6c per common share was paid Dec. 31, 1959. Dividends totaling 60c per share were paid on the participating preferred stock.

Outstanding capitalization at Dec. 31, 1958, consisted of 927,227 6% participating preferred shares, $10 par, and two million ordinary shares, $1 par.

Funded debt consisted of $5,460,000 4½% convertible sinking fund debentures, Series A, due 1976.

Company is controlled by **Sogemines Ltd.**

Due to carry-over of 1959 work because of bad weather, company anticipates that 1960 will be a "very good" year.

International Paints

International Paints (Canada) Ltd., Montreal, manufactures paints, varnishes and similar products. It is controlled by **International Paints (Holdings) Ltd.,** of London, Eng.

Company is one of a group of international companies with factories and agencies throughout the world. It has exclusive rights for Canada to all trade marks, patents and formulas of the parent company.

Subsidiaries are **International Paints (Ontario) Ltd.,** with warehouse in Toronto, **International Paints (Western) Ltd.,** with factory in Vancouver, and **A. Ramsay & Son Co.**

Net profit for the year ended Sept. 30, 1959, was $175,557 against $153,304 in the preceding year. Sales were highest in company's history.

Capital expenditures during the fiscal year amounted to $46,519. Construction of a small, modern manufacturing plant in Regina is under way. It will be in operation in early summer, improving company's competitive position in the Middle West.

Funded debt, originally $300,000 3½% debentures, was retired Dec. 1, 1958.

Outstanding capitalization consists of 50,000 6% cumulative, participating $20 par value preferred shares, 20,860 Class A nonvoting npv shares, and 7,140 Class B voting npv shares.

Kamic Investments Ltd.

Kamic Investments Ltd., Toronto, formerly **Gypsum, Lime & Alabastine, Canada,** has been sold to **Dominion Tar & Chemical Co.** Shares were delisted June 30, 1959 and company is being wound up.

Sale involved $14,018,325 and the assumption by Dominion Tar of all liabilities, other than to bondholders and shareholders.

Shareholders of Gypsum, Lime received two shares of Dominion Tar and $14.50 for each share held. It is estimated that of the total, $18 will be liable for income tax in the hands of individual shareholders. No tax liability would be incurred by most Canadian corporations receiving the distribution.

Operations of the company will be carried on as a division of Dominion Tar.

Lafarge Cement of N. America

Lafarge Cement of North America, Vancouver, manufactures and markets cement and related products. Plant commenced operations in May, 1958, with an initial capacity of 1.5 million bbl. It is located at Lulu Island, Vancouver.

Wholly owned subsidiary, **Beale Quarries Ltd.,** distributes limestone.

Financial results for 1959 are not yet available but company official states that increased sales have resulted in a "marked improvement" and "substantial profit before depreciation." Net loss for 1958 amounted to $160,803.

Delivery of a large order during the early months of 1960 will permit operations throughout the usual shutdown period. Shipments in April-December, 1959, were up 40% from 1958.

Outstanding capitalization at Dec. 31, 1958, consisted of 35,000 6% non-cumulative class A shares, $10 par and 560,000 common shares, $10 par.

Majority voting control is held by **Société Anonyme des Chaux et Ciments de Lafarge et du Teil** with certain of its subsidiaries.

Funded debt at Dec. 31, 1958, totaled $6.6 million and was made up of $3.6 million 5½% first mortgage sinking fund bonds, series A, due 1976 and $3 million 5¾% sinking fund debentures, due 1976.

L. Ont. Portland Cement Co.

Lake Ontario Portland Cement Co., Toronto, operates cement and aggregate plants at Picton, Ontario with packing plants at Rochester, N. Y. and Toronto.

Designed capacity of the plant is 1,650,000 (U. S.) bbl. cement and 600,000 tons commercial aggregate annually. The initial shipment of aggregate was made in August, 1957, and of cement in May, 1958.

Sales for the year ended Nov. 30, 1959, amounted to $4,184,000, compared with $1,537,156 for the eight-month operating period in 1958.

Rate of cement production has been at full plant capacity since May, 1959. Company intends to continue producing clinker at this rate during the winter in order to stockpile sufficient quantity to take care of anticipated summer sales.

Net loss for the year ended Nov. 30, 1959, amounted to $375,408. This compared with a loss for the previous year o. $1,249,232.

Capital expenditures amounted to $325,650; company does not anticipate expenditures of this size in 1960. In 1959, company installed aggregate washing equipment and rail and truck unloading facilities at the Toronto bagging and distribution plant.

Outstanding capitalization at Nov. 30, 1959, consisted of 188,561 5% convertible preferred shares, par $10, and 2,068,690 common shares par value.

Options were approved in November, 1958, on 38,000 shares to 14 employees. The options are exercisable over a period of 10 years. Altogether 187,500 shares are reserved in connection with options.

Funded debt totaled $13,497,400, made up of $7 million 5½% first mortgage bonds, due 1960-67, and $6,497,400 5½% redeemable sinking fund debentures, due 1971.

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They Help Build Canada

MacKinnon Str. Steel Co.

MacKinnon Structural Steel Co., with plant on a six-acre site at Sherbrooke, Que., is engaged in the fabrication and erection of steel frames for buildings, steel bridges, plate work, tanks and other plate products.

A marked decline in business, particularly in the first fiscal half, and low prices resulted in a net loss of $4[illegible] for year ended July 31, 195[illegible] against a profit of $135,9[illegible] in preceding fiscal period.

A retained earnings account has been set up and balances in earned surplus, distributable surplus and contingent reserve have been consolidated in this account which at July 31 was $613,729.

Included is $19,079 accumulated in the preferred stock sinking fund.

Company says plant, machinery and equipment have been maintained in good repair. Additions, including an automatic sprinkler system, cost $18,851 in 1958-59.

Outstanding capitalization at July 31 included $143,800 first preference 5% cumulative redeemable shares and 75,500 npv common shares.

Marwell Equipment Ltd.

Marwell Equipment Ltd., Vancouver, B.C., engages directly and through subsidiaries in general construction in Western Canada. It owns dredging, bridge building, pile driving and heavy construction equipment.

Company has exclusive rights to supply on a rental basis all equipment used by **Marwell Construction Co., Marwell (Alberta), Marwell (Manitoba)** and **British Columbia Bridge & Dredging Co.**, a wholly-owned subsidiary.

Among the projects completed last year were the stockpile fill of four million yd. for Vancouver International Airport; a 27-acre land reclamation at Campbell River on Vancouver Island; a $3.5 million power project on the Kenai Peninsula in Alaska; and a compressor station in Ontario for **Trans-Canada Pipe Lines Ltd.**

Work is continuing this year on a $4 million luxury marina-hotel and the $2 million United Kingdom building, both in downtown Vancouver.

The Marwell companies had a moderately profitable year in 1959 despite unusual competition induced by the influx of many large international construction companies in British Columbia which is driving prices to unrealistic levels, President H. A. Martin says.

Marwell Equipment has $[illegible],000 outstanding on an issue of 6% first mortgage sinking fund bonds, due 1964 ($1.2 million were issued originally).

MacM., Bloedel & Powell R. Ltd.

MacMillan, Bloedel & Powell River Ltd., Vancouver (formed by the merger of **MacMillan & Bloedel Ltd.** and **Powell River Co.** Dec. 31, 1959), is one of the largest manufacturers of forest products in the world.

In the five years prior to the merger, MacMillan & Bloedel derived some 75% of total receipts from its output of lumber and plywood, while Powell River received about the same percentage of its gross income from newsprint and pulp sales.

Through its divisions and subsidiaries, the new company controls a fully integrated lumber operation from close to two million acres of standing timber to the marketing of a wide range of finished products.

In addition to a combined newsprint capacity of 775,000 tons a year, the new company can turn out annually 680 million bd. ft. of lumber; 320 million sq. ft. (⅜ in. basis) of plywood; 400,000 doors; 390,000 squares of shingles; and 60,000 tons of kraft paper and board.

A flakeboard plant with an initial annual capacity of 20 million sq. ft. was put into operation late in 1959.

MacMillan & Bloedel net profit of $13,016,172 for the year ended Sept. 30, 1959, was 60.5% higher than previous year's $8,109,327. Earnings on class B stock were $2.45 ($1.54) per share. MacMillan shareholders received seven shares of the new company for each three MacMillan shares held.

Year's increase reflects a recovery from the setback of 1958 caused by three months' strike of employees in the pulp and newsprint mills, company says.

Logging operations continued at a high rate and sawmills and plywood mills operated satisfactorily until a strike (July 6 to Sept. 12) closed down these operations and the shingle and door divisions as well.

The market for lumber is strengthening following lower prices after the strike, says Chairman J. V. Clyne. Lower deep-sea freight rates, while helpful, have not changed the situation wherein Canada is gradually being excluded from the U. K. softwood market, except for specialty lumber, he says.

Domestic shipments of plywood were higher and prices improved from the low levels earlier in the year. Demand for kraft paper and board has been strong, and while prices were low, sales were considered satisfactory.

Capital expenditures amounting to more than $5.5 million were used for new mobile equipment and to increase the efficiency of mills and quality of products.

Over 6,500 acres of forest lands were replanted during the year.

Powell River Co. net profit for 1958, was $7,600,089 (90½c per share after giving effect to the 2-for-1 stock split), 2.1% lower than 1957's $7,762,377 (92½c). In the first half of 1959, net profit amounted to $4,762,200 (56½c) against $2,914,693 (34½c) in the corresponding period a year earlier.

Lumber production in the first half of last year was 41% higher at 45.4 million bd. ft., and sales rose 35% to 43.2 million bd. ft. Sales for the last half were adversely affected by the 10-week woodworkers' strike, but company anticipated that demand would approximate that of the first six months.

If the MacMillan-Powell River exchange offer is fully accepted by MacMillan shareholders, the new company will have an issued capital of 20.8 million shares, of which 8.4 million will be held by former Powell River shareholders and 12,426,255 by those of MacMillan & Bloedel.

Martineau & Deschambault

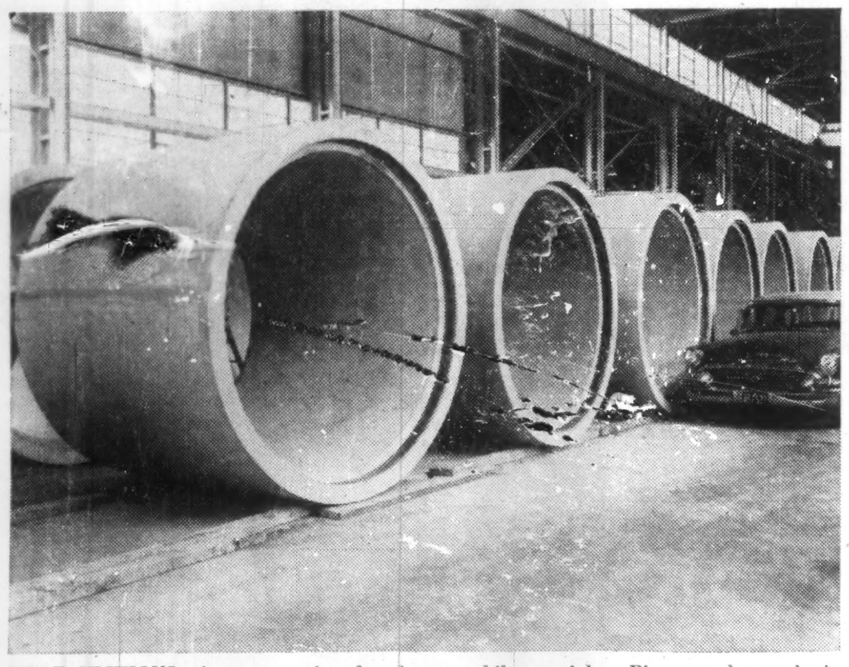
Martineau & Deschambault Quarries Inc., Montreal, are cut stone contractors, specializing in limestone and granite. Company also manufactures a fertilizer sold under the name of Calco.

Quarries are at St. Marc des Carrières, St. Alban and St. Gerard, Que. Manufacturing plants are at Montreal, St. Marc and St. Gerard.

Sales have been increasing steadily due to the construction boom in the Montreal area.

Outstanding capitalization consists of 6,000 $10 par value common shares. There are an authorized 5,400 5½% noncumulative preferred shares of which 25 have been issued at $100 par.

Funded debt includes $300,000 4½% first mortgage bonds, due 1963.



HUGE SECTIONS of concrete pipe dwarf automobile at right. Pipe can be made in diameters up to 96 in. for sewer and water systems.

Meadowvale Devel. Ltd.

Meadowvale Developments Ltd., Toronto, is engaged in the acquisition, development and sale of land, and in the construction of industrial, commercial and residential buildings for sale or lease.

In March, 1959, company reported ownership of 1,274 acres of land at Meadowvale, near Toronto, less 103 acres expropriated by the Ontario Department of Highways for a four-lane transprovincial highway which passes through the property.

A plan of development has been completed for the area and negotiations are under way to obtain approval of local and provincial authorities.

Sewage and water services should become available in the area early in 1960, company says.

Total assets amounted to $1,572,714 at Oct. 31, 1958, including land held for development valued at $1,364,860.

Outstanding capitalization consists of 500,003 npv common shares, including 150,000 offered to the public in February, 1957, at $3.50 per share.

Funded debt at Oct. 31, 1958, consisted of $597,245 principal amount 5% and 6% mortgages, repayable 1959-68, given in part payment for purchase of land.

Milton Brick Co.

Milton Brick Co., Toronto, manufactures first-quality face brick from rock shale by the dry press and wire-cut methods. Annual capacity is about 30 million bricks.

Company's plant near Milton is located on nearly 200 acres of red and buff deposits of medina shale.

Milton Brick also owns, but no longer operates, 100 acres of medina shale in Nassagaweya township, Ont., and 50 acres of similar shale at Streetsville. Plants on these properties were dismantled in 1930.

In the spring of 1957, company acquired all the issued capital stock of **Regal Transport Ltd.**, the trucking firm which has delivered Milton Brick's product for a number of years.

A rock quarrying plant was put into operation in 1958 on property leased by the company to **Milton Quarries Ltd.** (a subsidiary of **Macassa Mines Ltd.**) to quarry and remove rock on a royalty basis.

Volume of business for the first half of 1959 was unchanged from a year earlier, company reports. Installation of new crushing equipment to level out production capacity is being considered.

Consolidated net profit for 1958 amounted to $150,258 as compared with unconsolidated profit of $67,703 for 1957. Earnings were 27c (29c) per share.

Earnings of Regal Transport Ltd. were included with parent's for the first time.

Profits increase was mainly due to a 25% sales increase over 1957, and improvement in average selling price, company said.

Plant operated at peak capacity on a two-shift basis from April through December.

Capital expenditures of $75,000 during the winter of 1958-59 were practically completed by April 30.

Outstanding capitalization at Dec. 31, 1958, consisted of 550,000 npv common shares. Dividends are being paid at the rate of 20c per share.

Miron et Frères

Miron et Frères Ltée, St. Michel, Que., with its subsidiaries, produces and distributes concrete, sand, lime, crushed stone, asphalt, concrete products and cement. A subsidiary is engaged in street construction and general concrete work.

Company has just completed a new cement plant in suburban Montreal. Capacity has been reported to be four million bbl. annually. Cost details haven't been released.

The plant will supply Miron's needs, which usually run to more than one million bbl. annually. Presumably, the remainder of capacity will be devoted to serving the general market.

Subsidiaries include **Canada Concrete Products Inc., Miron Construction Ltd., Canadian Perlite Corp., Oka Sand & Gravel Inc., Miron Quarry Ltd.**

Garva Inc., an investment firm, is a subsidiary of Canada Concrete Products.

Company says business in year ending June 30, 1959, was better than in the previous year. Profit also improved.

Outlook for the 1959-60 year reportedly is for further business improvement although there is some doubt about the general level of residential construction.

Net profit for year ending June 30, 1958, was $363,719, on total revenue of $17.8 million.

Outstanding capitalization includes 100,000 $100 par common; $400,000 $100 par 4% non-cumulative preferred; $2,150,000 5% Series B first mortgage bonds, due 1964; $2.3 million 6% and 6½% Series C first mortgage sinking fund bonds, due 1964.

Monarch Mtge. & Invests. Ltd.

Monarch Construction & Investment Ltd., Toronto, owns and operates a number of shopping centres and apartment blocks.

Monarch Construction & Realty Ltd. and **Monarch Construction (Quebec) Ltd.**, both wholly owned subsidiaries, operate in the Toronto and Montreal areas where they own land and undertake subdivision development build and sell houses, and erect stores and apartments for the parent company.

Monarch Construction completed its development interests in Kipling Heights, Bakewell Manor and Churchill Heights in 1958. A further block of approximately 122 acres known as Don View Heights Subdivision, was acquired in the township of North York, Toronto.

Two new subsidiaries formed in 1957, **Watercliffe Holdings Ltd.** and **Kipling Heights Shopping Centre Ltd.** were activated during 1958. The first stage of a 38-unit maisonette development was proceeding and plans were also being completed for the establishment of a community shopping centre during 1959, company said in its 1958 report.

In November, 1959, company officially opened its new $2 million nine-story Monarch Building in Toronto.

Net profit of $146,939 for 1958 (latest figure available) was 7.6% higher than 1957's $136,509.

Profit includes increased dividend of $50,200 from Monarch Construction & Realty. Rental income increased again, President Frank Taylor said.

Outstanding capitalization at Dec. 31, 1958, consisted of 42,181 npv common shares. Dividends per share are being paid at the rate of $2 annually, apart from an extra dividend of $1 per share that was paid in each of the last four years.

Long-term liabilities at Dec. 31, 1958, were made up of mortgages payable in the amount of $2,292,356.

Dom Road Machi[illegible]

Dominion Road Machinery Co. and its wholly owned subsidiary, **Dominion Road Machinery Sales Co.** manufactures and sells road and other machinery. Sold under the trade name "Champion," products manufactured include power graders, mobile gravel crushing and screening plants, rock crushers and snowplows.

Net profit for year ended July 31, 1959 amounted to $29,243 or 97c per share.

At July 31, 1959, total assets were $1,678,878. Cur-

(Continued on page 91)

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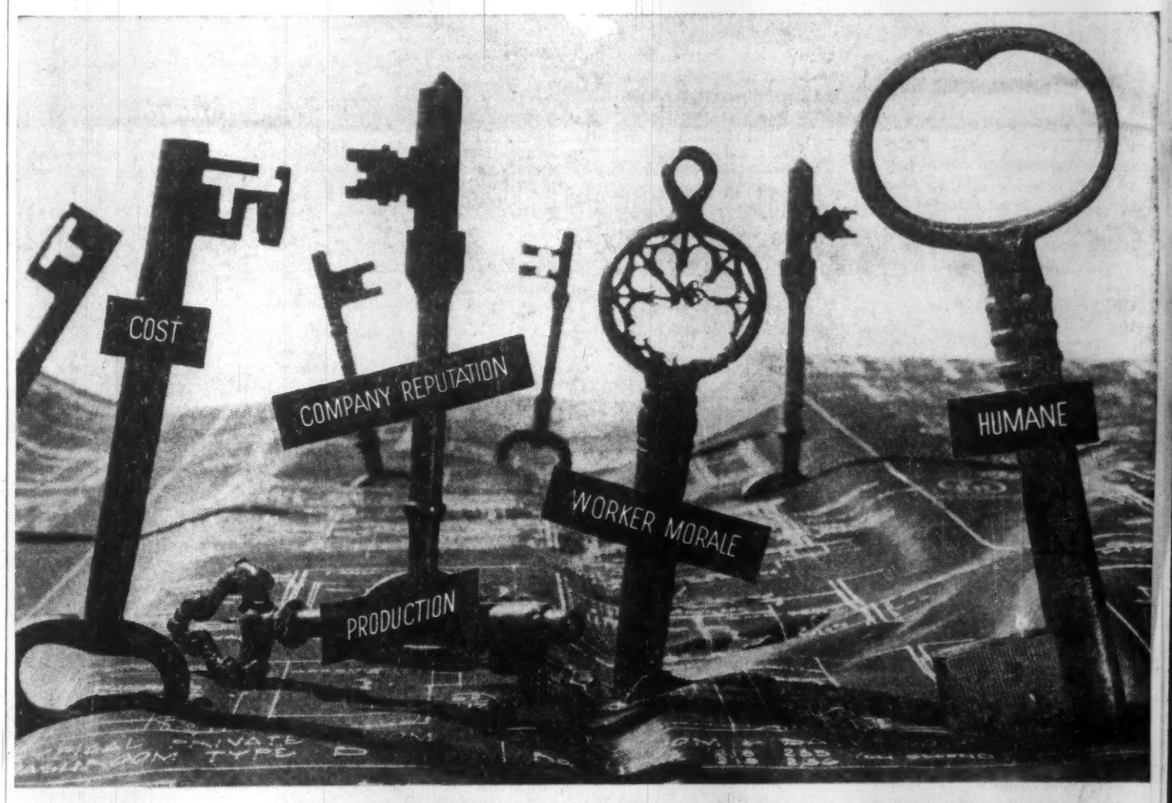

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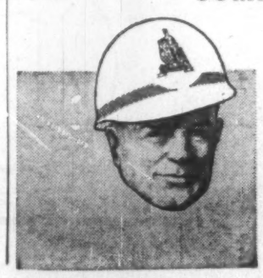

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(CONTINUED FROM P. 90)

rent assets totaled $1,031,680 and included cash of $9,175 and inventories of $504,475. Current liabilities amounted to $726,866.

Funded debt consisted of $60,000 5½% first (closed) mortgage sinking fund bonds, due 1964. Outstanding capitalization consisted of 30,000 npv common shares.

National Sewer Pipe Ltd.

National Sewer Pipe Ltd., Toronto, manufactures, sells and distributes vitrified clay products including sewer pipe, wall coping, flue lining, electrical and telephone conduits, segment sewer blocks, radial chimney blocks, field draining tile, vitrified block for acid towers, etc.

About 95% of its production is sold in Ontario to municipalities, contractors and building supply dealers, and the balance marketed throughout Canada. Plants are located at Hamilton and Swansea, Ont.

A wholly owned subsidiary, **National Concrete Products,** has a concrete pipe plant at Mimico, Ont. A new plant at Clarkson, Ont., was completed in 1954.

Company also has a 55% interest in **Canada Vitrified Products Ltd.,** St. Thomas, Ont.

Net profit was $224,611 for the 18 months ended April 30, 1959, compared with net profit of $50,637 for the 12 months ended Oct. 31, 1957.

Not included in the net profit for the latest period was a $315,585 profit on sale of fixed assets and a $1,150 profit on sale of investments.

Financial statements of subsidiary companies are not included in those of the parent company.

Outstanding capitalization at April 30, 1959, consisted of 46,435 non-cumulative redeemable preference shares, $15 par, and 53,195 common shares.

Funded debt consisted of $795,000 5½% first mortgage bonds and $488,000 6½% debentures, both issues due Jan. 2, 1973.

Ocean Cement & Supplies

Ocean Cement & Supplies Ltd., Vancouver, through subsidiaries, is engaged in the manufacture and/or sale of cement and all types of building materials except lumber. Company also distributes coal and steel products, maintains wharves and warehouses, and operates over 300 trucks and trailers and a fleet of tugs and scows.

Main operating subsidiaries are **British Columbia Cement Co.** and **Evans, Coleman & Gilley Bros. Ltd.**

Portland cement, sold under the trade names "Elk Brand" and "Ferrocrete", is produced at a 3.5 million bbl. annual capacity plant at Bamberton, 20 miles north of Victoria, B.C.

Limestone reserves available to the company exceed 300 million tons, with more than 35 million tons of high-grade reserves lying in the area of the plant.

In anticipation of future expansion, two plant sites have been purchased at Deep Bay on Vancouver Island and at Burnaby near Vancouver.

The wide range of construction materials distributed by Evans, Coleman & Gilley Bros., include all sizes of concrete pipe, clay vitrified sewer pipe, clay tile, brick and refractory products, and ready-mixed concrete produced by its own subsidiaries.

Through other subsidiaries, Coleman, Evans operates extensive transportation and storage facilities.

Consolidated net profit for 1958 (latest figures available), totaled $1,137,487 ($2,111,722 in 1957), equal to $1.13 ($2.10) per common share.

Decrease in earnings was attributed to disturbed industrial relations in the British Columbia construction industry and excess capacity of building supply facilities in the area served by the company.

Capitalization outstanding at the end of 1958 consisted of 1,003,200 npv common shares and long-term debt of subsidiaries totaling $773,713.

Ritchie Cut Stone Co.

Ritchie Cut Stone Co., Toronto, operates a stone-cutting mill at New Toronto. Company is controlled by **Canada Crushed & Cut Stone Ltd.** and accounts are consolidated with those of the parent company (see separate story).

At last report, the parent owned 7,372 of the 7,422 preferred shares and 10,885 (99%) of the 10,985 common shares outstanding.

Large buildings for which Ritchie Cut Stone has fabricated Queenston limestone and imported American building stone include: Bank of Montreal, Toronto; Bank of Nova Scotia, Toronto; Main Postal Building, Ottawa; Laurentian Hotel, Montreal.

St. Lawrence Cement Co.

St. Lawrence Cement Co., Quebec City, Que., operates cement plants at Villeneuve, Que. and Clarkson, Ont. Distribution plants are located in Montreal and Fort William; two new distributing installations will be in operation shortly in Ottawa and London, Ont.

The Villeneuve plant has capacity to produce two million bbl. of cement annually; capacity of the Clarkson plant is around four million bbl. annually.

Company also operates a limestone quarry at Ogden Point, near Port Colborne, Ont.; shipments are made by water to Clarkson. It has acquired or holds under option deposits of gravel, sand and stone in the Toronto area, which will enable company to enter the ready-mix concrete market as soon as conditions warrant.

(Company's unsuccessful bid to buy a minimum of 500,000 shares of **Standard Paving & Materials Ltd.,** Toronto, at $24 per share last fall, was made with the hope of acquiring a foothold in the ready-mix market through an existing organization.)

Net profit in 1958 totaled $846,104, an increase of 145.3% over 1957's $344,986. Earnings were equal to 99c (40c) per class A and B share. No dividends have been paid yet. Financial statements for 1959 have not yet been published.

Company is controlled by a group of Swiss manufacturers headed by **Holderbank Financière, Glaris, S.A.,** which owns all outstanding class B shares.

Outstanding capitalization at Dec. 31, 1958 consisted of 570,190 npv class A shares and 282,000 npv class B shares.

Long-term debt comprised $1,050,000 3½% series A bonds, due 1960 to 1962; $4,750,000 4½% series A bonds, due 1971; $9.5 million 6% series B bonds, due 1975; $2,750,000 5¾% series C bonds, due 1960 to 1964; $7,172,500 6% unsecured debentures, series A due 1979; and $3.5 million 5½% unsecured debentures, series B, due 1979.

Saint John Dry Dock Co.

Saint John Dry Dock Co., East Saint John, N.B., owns and operates one of the largest dry docks in the British Commonwealth.

It is the only dry dock in Eastern Canada that can accommodate the largest merchant ships afloat on a year-round basis.

Company was taken over last year by interests of New Brunswick industrialist K. C. Irving. No price was given.

Irving has moved in new management and a program of streamlining present facilities is now nearing completion. A second phase is planned calling for several additions to existing facilities.

It will continue to operate as a self-contained subsidiary.

Company, through subsidiaries, engages in dredging, marine contracting, fabrication and erection of steel for bridges and buildings.

The steel department accounts for an important part of the company's total business.

Company's dry dock has an extreme length of 1,150 ft. and width of 133 ft. Depth is 43 ft.

It can be used as a single unit or as two separate compartments 650 ft. and 500 ft. long respectively.

Company has constructed four deep water berths in the turning basin to accommodate vessels waiting to enter dry dock and to facilitate fitting out work and repairs not requiring dock facilities.

Company has one dredge and several associated scows. It has an arrangement with an allied company to obtain the use of several smaller ones when needed.

Financial figures for last year are not yet available. A company spokesman told **FP** that 1959 results were "about the same" as 1958, when a net profit of $126,770 or $17.06 per share was recorded. The spokesman said the 1960 outlook seemed to indicate increased business.

About 500 men are working in the yard.

Sarnia Bridge Co.

Sarnia Bridge Co., Sarnia, Ont., is a 97% owned subsidiary of **Anthes-Imperial Co.,** St. Catharines, Ont.

Company formerly operated a structural steel plant engaged in fabrication of steel bridges, structural steel, joists, roof trusses and sashes, and various other steel products.

Operations in the construction field ceased as of Dec. 31, 1959. Anthes expects to dispose of Sarnia Bridge's manufacturing facilities in the near future.

Sarnia Bridge, however, will retain its corporate entity. Its future role in the Anthes-Imperial group has not yet been determined, but it will likely operate as a holding company.

Scarfe & Co.

Scarfe & Co., Brantford, Ont., manufactures and sells varnishes, paints, enamels, lacquers, waxes, polishes, etc.

It has a plant at Brantford and sales branches throughout Ontario, in Montreal and Trois Rivières, Que., and distributors in Winnipeg and the Maritimes.

Net profit of $59,343 in 1958 was 3.4 times 1957's $17,596 (which included $12,540 profit on sale of fixed assets). Earnings per class A share were $1.70 (50c in 1957) and per class B share, 60c (20c deficit in 1957).

Results for 1959 have not yet been published.

Dividend rate of 80c per annum on class A shares has been maintained since May, 1947. No dividends have been paid on class B shares since 10c quarterly payment on Feb. 1, 1957.

Outstanding capitalization at Dec. 31, 1959 consisted of 34,999 npv class A shares and 52,501 npv class B shares.

Standard Clay Products Ltd.

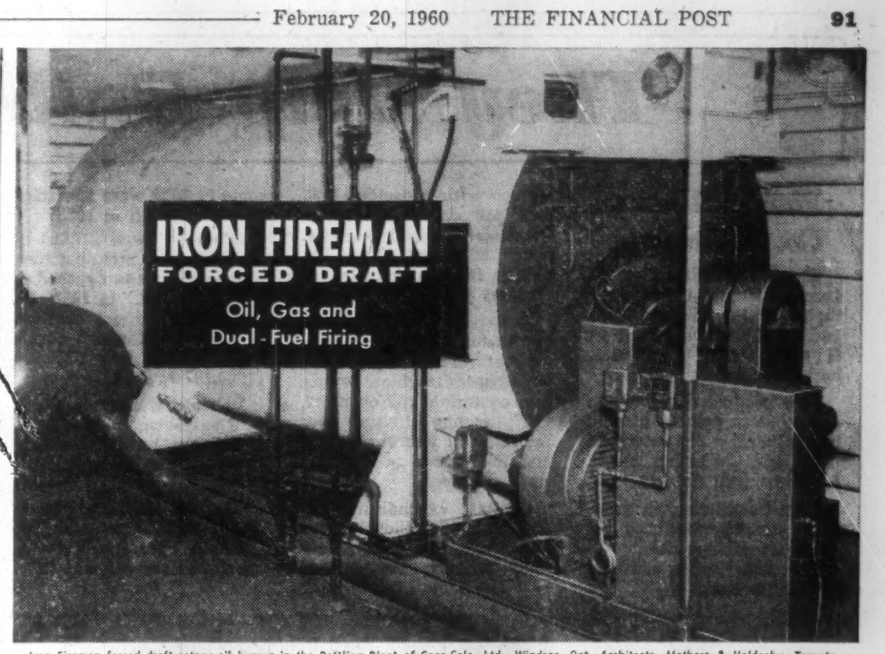
Standard Clay Products Ltd., St. Johns, Que., manufactures salt glazed, vitrified and fire clap products, including sewer pipe, culvert pipe, wall coating, flue linings, etc.

Company owns plants at St. Johns, Que., and New Glasgow, N.S. Capacity of plants is about 25,000 tons annually.

A subsidiary is **Standard Concrete Products Ltd.** which operates a concrete sewer pipe plant at St. Johns.

Standard Clay was taken over by **Feralco Industries Ltd.** in 1957 and statements are consolidated.

Outstanding capitalization of Standard Clay Dec. 31, 1959, consisted of $360,000 6% first mortgage bonds due 1962, and 7,500 $100 par common shares.



Iron Fireman forced draft rotary oil burner in the Bottling Plant of Coca-Cola, Ltd., Windsor, Ont. Architects, Mathers & Haldenby, Toronto.

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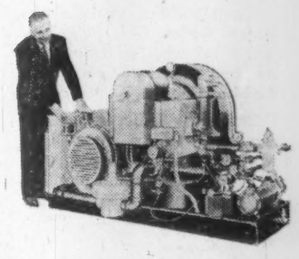

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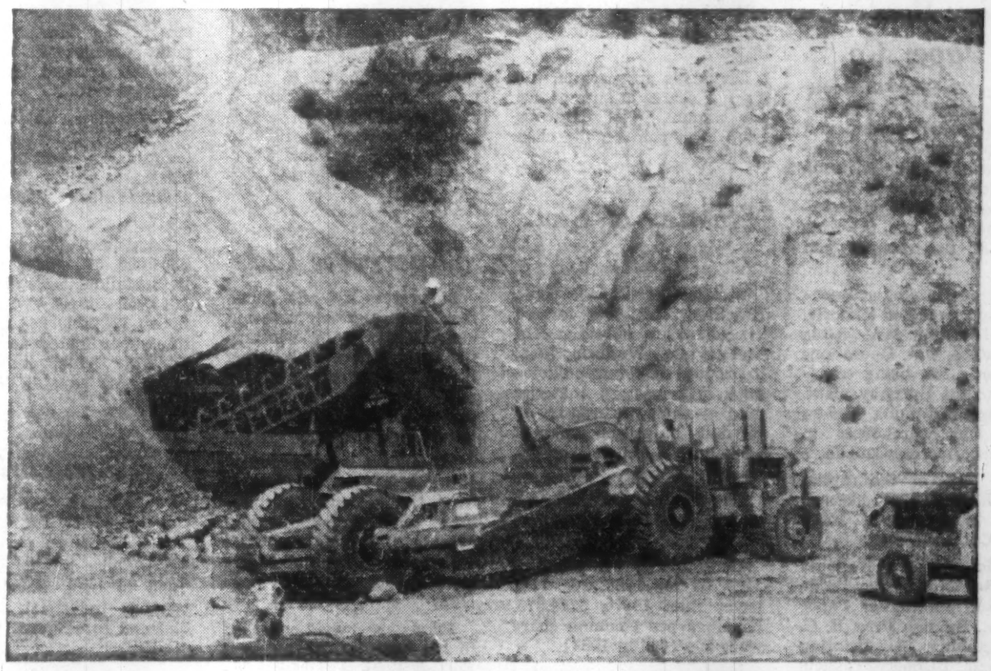

It's new, weighs 25 tons and Timken bearings make it portable

EARTHMOVERS really take a second look when they see this new Kolman Mfg. Co. Model 303 60" belt loader at work. It weighs a big 25 tons, yet it's portable. It can convey one cu. yd. per sec.; has belt speed of 375 fpm.; handles 1,000-lb. boulders as easily as gravel. And Timken tapered roller bearings not only roll the tremendous loads on belt idlers, they also carry the entire weight of the machine. Timken bearings are used in the Hewitt-Robins troughing idlers; in pillow blocks on the head pulley shaft and secondary countershaft; and in the tandem axle undercarriage. Cost-conscious construction equipment builders and users want Timken bearings because they:

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They Help Build Canada

Sher.-Williams Co. of Canada

Sherwin - Williams Co. of Canada, Montreal, manufactures a wide variety of paint and allied products as well as Green Cross insecticides, herbicides and fungicides.

New products expected to add to sales volume include Kem-Guard, a fire retardant paint, and the Loxon line of basement wall finishes.

Kem Colormeter, an automatic selector introduced last year, has made it possible to offer a wider range of colors in retail outlets.

Wholly owned subsidiaries are **Canada Paint Co.,** Montreal; **Winnipeg Paint & Glass Co.,** Winnipeg; **Martin-Senour Co.,** Vancouver; and **Lowe Brothers Co.,** Toronto.

Canada Paint in 1958 acquired **Dufort Ltd.,** a distributing branch. An associated company is **Carter White Lead of Canada.**

Sherwin-Williams has 108 branches (97 a year ago) which, besides selling directly to consumers and painters in their immediate areas, serve as convenient warehouses.

A new plant and warehouse at Annacis Island, in the Vancouver area, should enable the company to obtain a bigger share of the Western Canadian market.

New warehouse facilities at St. James, Man., to serve the growing prairie market, were completed last summer.

In fiscal year ended Aug. 31, 1959, sales reached a record high, reflecting an industry-wide trend. Sales in the first quarter of the new fiscal period were a little ahead of a year ago.

Net profit for the year ended Aug. 31 was $1,073,320, equal to $3.70 a common share, against $1,006,808 or $3.40 a share, in the preceding year.

Capitalization at Aug. 31 consisted of 34,600 shares of 7% cumulative $100 par value preferred stock and 224,720 npv common shares.

Sidney Roofing & Paper Co.

Sidney Roofing & Paper Co., Burnaby, B.C., manufactures asphalt roofing and allied products. These include asphalt shingles, insulated sidings, various building papers, asphalt preservative coatings and a wide range of paperboards and cartons.

Plants are located at Burnaby, Vancouver and Victoria, B.C.; Lloydminster, Alta., and Mimico, Ont. Operations at Victoria are being transferred to the Burnaby plant. Company maintains sales offices and warehouses in seven cities across Canada.

Over 90% of the capital stock, including all class B shares, is owned by **Eddy Paper Co.,** Hull, Que.

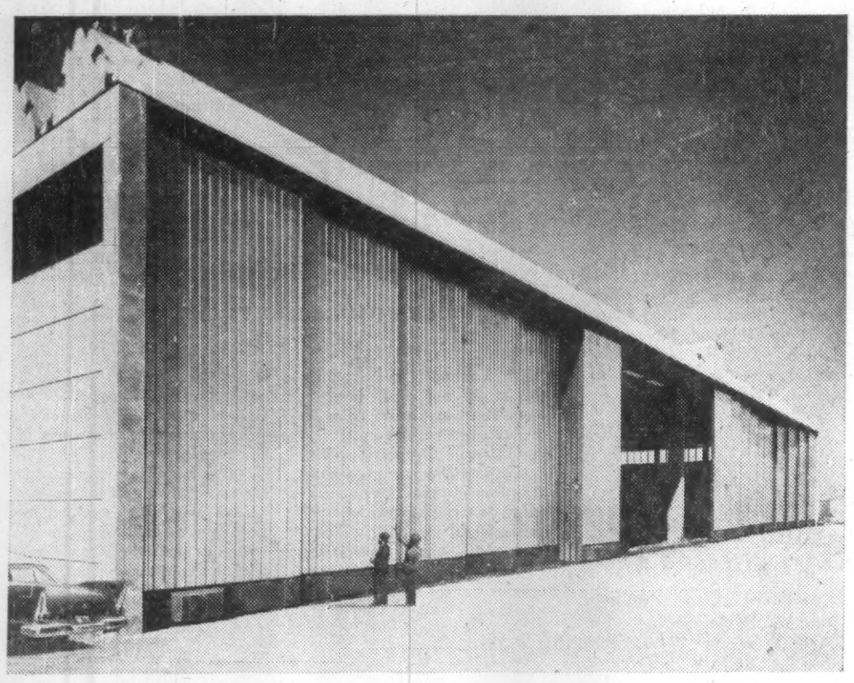
Subsidiaries are **National Paper Box Ltd., Sidney Products Ltd., Vancouver Paper Box Co., Bulman Bros. B. C. Lithographing & Printing Ltd.** and **Bishop Products Ltd.**

In 1958 former subsidiaries **Bishop Asphalt Papers** and **Portneuf Investments Ltd.** were wound up.

A rock wool plant in Mimico with capacity of 30 tons per day is leased to **Associated Mineral Wool Co.** which is owned jointly by Sidney Roofing and **Holmes Foundry Ltd.**

Construction of new roofing material plant at Burnaby started in 1956. New paperboard machine went into operation in November, 1957; roofing division was relocated in February, 1959, and final move is expected early this year.

Capital expenditures in 1958 were $2 million, most of which was used for the Burnaby project. Further expenditures of $1.9 million were scheduled for 1959.



CUSTOM DESIGNED doors for new aircraft hangar, at Calgary's McCall Field, present clear opening of as much as 200 ft.

Consolidated net income for 1958 of $471,854 was 33.4% lower than 1957's $708,433. Earnings per class A and class B share were $9.44 and $4.27 respectively ($14.17 and $6.63 in 1957).

Earnings were reduced by construction tie-ups resulting from labor disputes in which Sidney Roofing was not involved, company reported. Sales volume was higher than in 1957.

Dividends are paid on the class A shares at rate of 90c per annum. No dividends have been paid on the class B stock.

Steetley of Can. Ltd.

Steetley of Canada Ltd., Hamilton, Ont., was formed in 1952 as a subsidiary of **Steetley Co.,** Worksop, Eng., to produce dead burned dolomite, a refractory material used by the steel industry in the daily lining and repair of open-hearth and electric furnaces.

The English firm owns all of the outstanding common shares.

Consolidated net profit of $190,799 for 1958 was 11% lower than 1957's $214,375. Earnings per common share were 58c (68c in 1957).

Lower earnings resulted from a 12-week strike at the works of company's largest customer.

Steetley has recently reported that sales and net income in 1959 were appreciably better than in 1958.

Company owns 127,000 of the 190,000 npv common shares of **Canada Crushed & Cut Stone Ltd.** In 1958 this subsidiary had net earnings of $398,723 of which Steetley's portion was $250,016 ($263,132 in 1957).

Dolomite Refractories Ltd., a wholly-owned subsidiary, is dormant, but its assets are being utilized by Steetley.

Outstanding capitalization at Dec. 31, 1958, consisted of 10,000 4½% cumulative redeemable preferred shares, series A, $100 par, and 250,000 npv common shares.

Funded debt comprised $690,000 5¼% first mortgage sinking fund bonds, series A, due Dec. 1, 1962, and $495,000 5½% general (closed) mortgage sinking fund bonds, due June 1, 1965.

Outstanding capitalization at Dec. 31, 1958, consisted of 50,000 $1 par class A shares and 100,000 npv class B shares.

Funded debt comprised $1.5 million 4½% serial bonds due Sept. 1, 1960 to 1965; $5 million 4½% sinking fund bonds due Sept. 1, 1975; $900,000 5¾% serial bonds due May 15, 1960 to 1968; and $2 million 5¾% sinking fund bonds due May 15, 1978.

Supercrete Ltd.

Supercrete Ltd., St. Boniface, Man., manufactures and distributes in midwestern Canada, concrete building blocks, sewer pipe, ready-mix concrete, prestressed precast shapes, acoustic tile, gravel and sand, etc.

Through a wholly owned subsidiary, **Thos. Jackson & Sons Ltd.,** company distributes building supplies in Winnipeg, and is exclusive distributor in Manitoba for a steel window and door concern.

Plants are owned or leased in St. Boniface, Regina, and Fort William. Other subsidiaries are **Tru-Flow Pipe Ltd., Supercrete (Sask.) Ltd.** and **Supercrete (Ontario) Ltd.**

Consolidated net profit of $568,537 in 1958 was 180.9% higher than 1957's $202,396. Earnings were equal to $1 (39c) per share. Results for 1958 included $125,000 non-operating profit on sale of land development rights.

Sales were divided as follows in 1958: ready-mix concrete 30%; building supplies 20%; concrete blocks 17%; sewer pipe 13%; precast and prestressed concrete 11%; and sand, gravel and miscellaneous items, 9%.

In the first four months of 1959, net profit was equal to 1c per share (4c loss in like 1958 period). Company's business is seasonal, bulk of sales occurring in the warm weather months.

Offering of 300,000 shares was made in the U. S. last year at $7⅜ (U. S.) per share. Of the $2.2 million proceeds, $1.3 million went to company for 200,000 treasury shares and $663,750 to **Apex Control Ltd.,** a stockholder.

Bank loans ($2,735,000 at June 30, 1959) were reduced by about $1,750,000 as a result of the financing. Company subsequently borrowed $663,750 secured by three-year 6% notes.

Outstanding capitalization at June 30, 1959, taking into account the issue of 200,000 shares, consisted of 850,247 common shares, 25c par value.

Long-term debt comprised $304,000 6% notes payable in installments until 1966; $663,750 three-year 6% notes; $724,000 6% convertible subordinated debentures due May 1, 1967; and $40,000 mortgages payable by subsidiaries.

Thorncliffe Park Ltd.

Thorncliffe Park Ltd., Toronto, was incorporated in 1955 to own, develop and manage industrial, residential and commercial lands.

Company owns substantial tracts of land in Leaside, Metropolitan Toronto, with a book value of more than $4.5 million.

Development of this area continued during 1959. A new community, known as Thorncliffe Park, is now in an advanced state of development. Land was resold to individual contractors for the construction of apartment buildings and a 22-acre shopping centre.

Some 30,000 sq. ft. is available for store space and smaller shops, in addition to space used for a **Steinberg's** supermarket.

During the year arrangements were completed with municipalities and Ontario Hydro for provision of school, sewer, bridge, power and other services.

Also included in company's Leaside development program are 56 acres of office and commercial buildings and 53 acres of industrial plant sites.

In April, 1959, **Bache & Co.** purchased from Thorncliffe $4 million principal amount of 6% sinking fund debentures, Series A, and 80,000 shares in the company. Company realized $3,768,548 from the transaction.

Six apartment buildings containing 380 units were completed and six new buildings with a total of 442 suites were under construction at the beginning of this year.

At Feb. 28, 1959, company's working capital was $1,737,645.

When completed the development will provide living accommodation for 12,500 people.

Toronto Iron Works Ltd.

Toronto Iron Works Ltd., Toronto, designs, manufactures and erects steel plate products and special metals, such as stainless steel, nickel, "Monel", "Inconel", aluminum and clad steel plate, at its Toronto, Edmonton and Richmond Hill, Ont., plants.

Toronto plant, on a 11½-acre site, is designed to make both light and heavy steel plate and alloy tanks and pressure vessels.

A subsidiary, **Dominion Scott, Barron Ltd.,** does engineering work in plant design from pilot to production, in the chemical, food and allied industries.

In April, 1956, Toronto Iron Works and **Canadian Kellogg Co.** formed a new firm, **T.I.W. Western Ltd.,** with head office in Edmonton. New firm acquired the plant and inventories of Canadian Kellogg in Edmonton. Toronto Iron invested $600,000 in the new firm, and in 1957 an addition to the new plant was completed.

Central Bridge Co., a wholly owned subsidiary, together with another subsidiary, **Supreme Boiler & Engineering Co.,** entered the steel joist manufacturing field at Richmond Hill, Ont., to serve the home builders' market for light structural steel and joists.

Until last September, Supreme had been inactive. Its name was changed to **Supreme Steel & Engineering Co.**

Substantial losses in 1959 were anticipated. Company announced that dividends would be omitted.

For 1958, net profit was $208,914 or $2.22 per Class A and $1.58 per common share. The year before, earnings per share were respectively $10.14 and $7.19.

Outstanding capitalization at Dec. 31, 1958, consisted of 94,000 60c cumulative participating non-callable npv Class A shares and 38,600 npv common shares.

Company first omitted a 25c quarterly dividend last October. Dividend record had been regular since 1952.

Company's operations have not resulted in a profit because of the continued price cutting in the steel fabricating industry which has affected sales of structural steel and steel plate work, it was stated.

Toronto Iron has undertaken a program of reducing costs and improving operating efficiency, president G. E. Ellsworth said.

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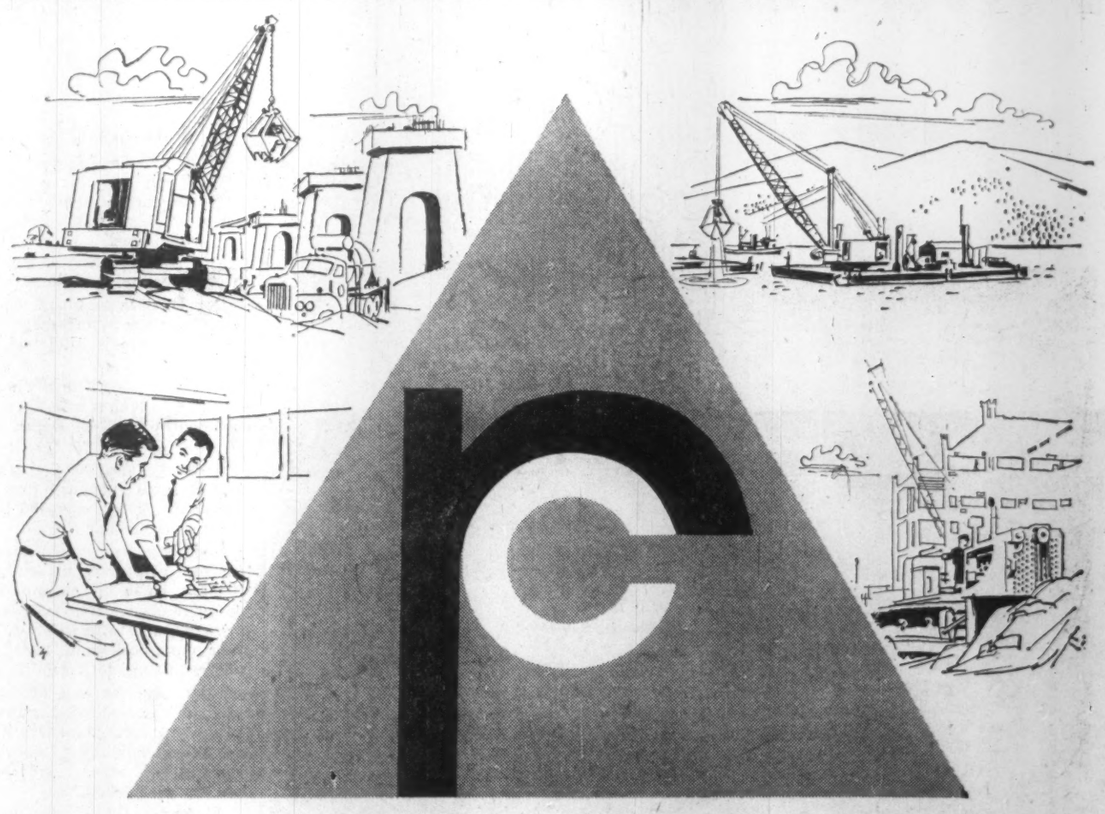

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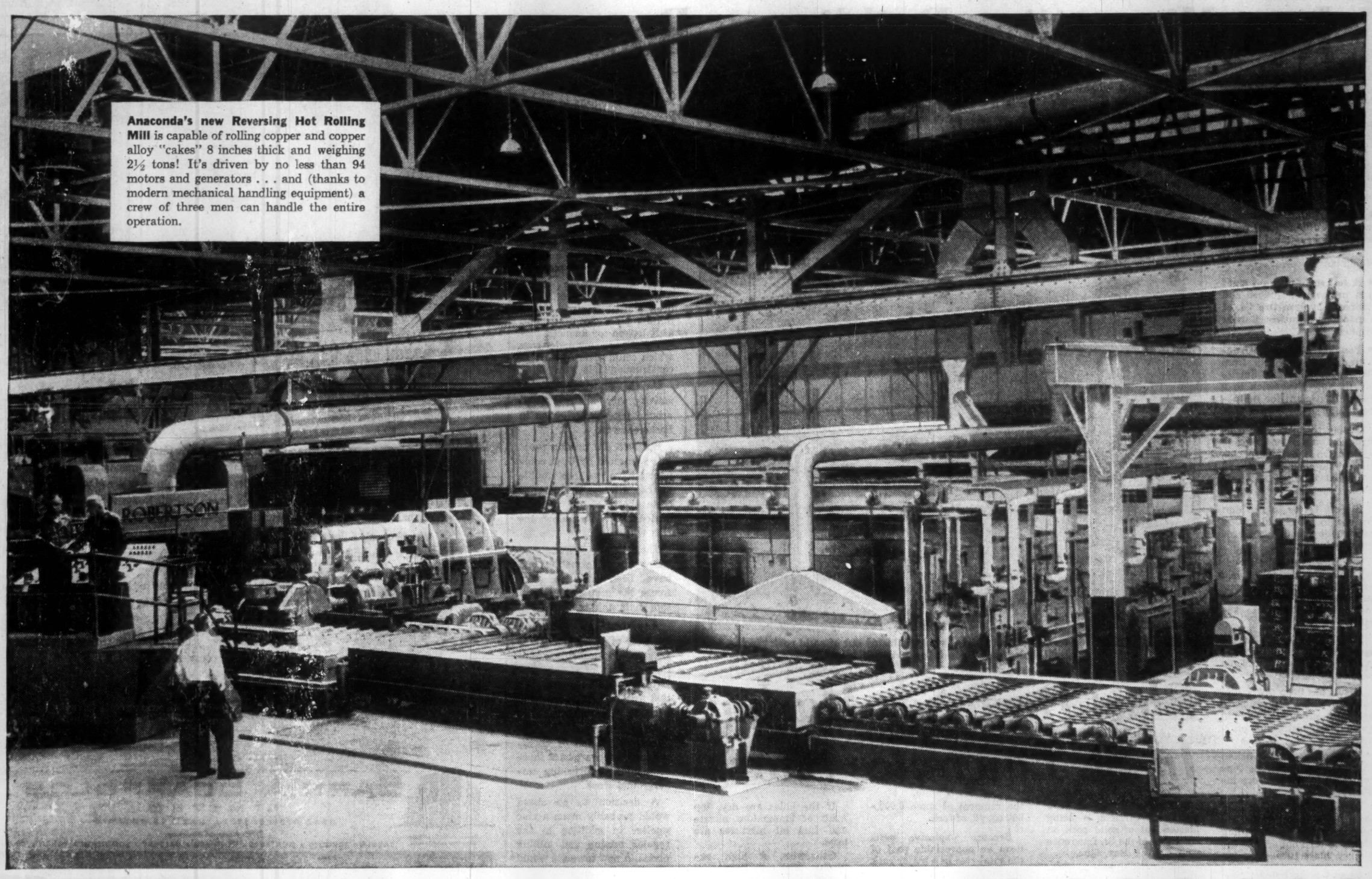
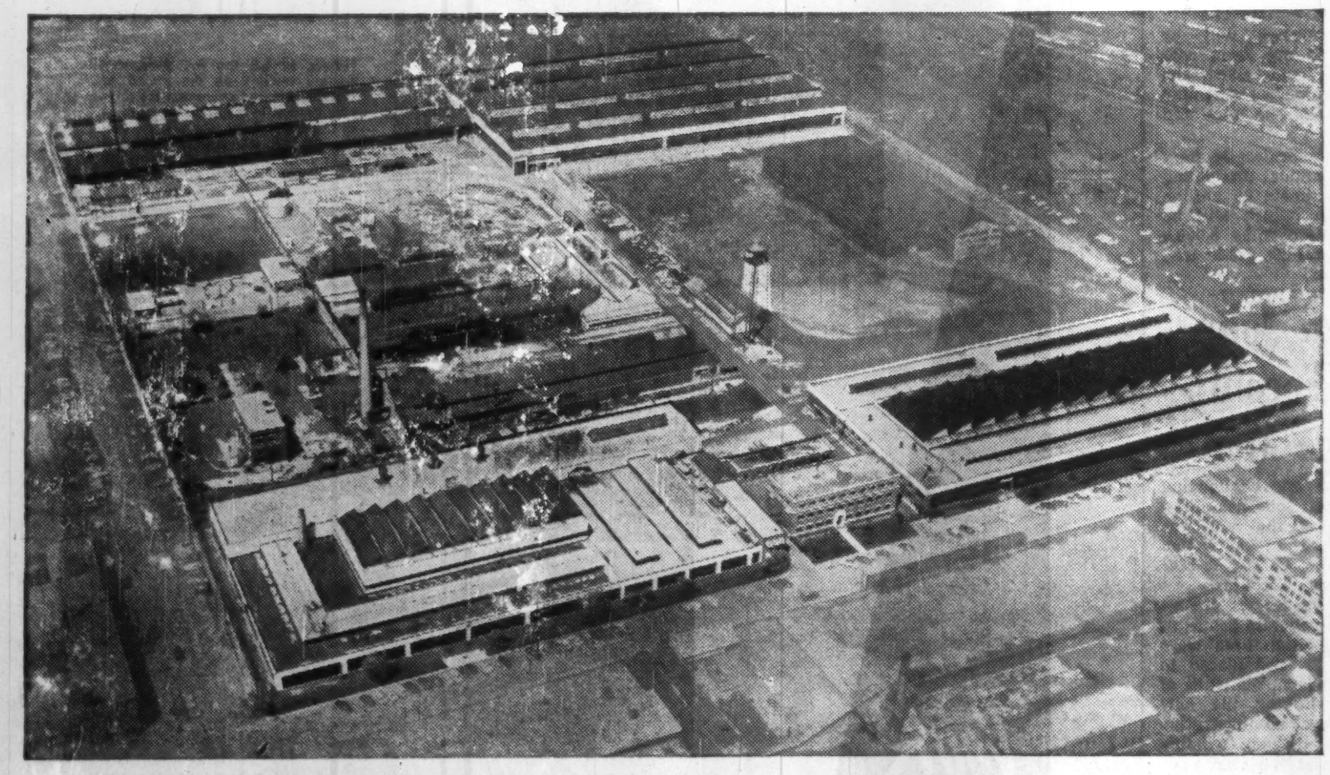


Anaconda's new Reversing Hot Rolling Mill is capable of rolling copper and copper alloy "cakes" 8 inches thick and weighing 2½ tons! It's driven by no less than 94 motors and generators . . . and (thanks to modern mechanical handling equipment) a crew of three men can handle the entire operation.

Anaconda invests another $3,000,000 in Canada's future!



Two new Mills in full operation.

Anaconda produces Canada's most complete range of copper and copper alloys in the form of sheet, strip, tube, rod, special wire and extruded shapes.

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Anaconda products are as Canadian as the Maple Leaf!

As we produce more . . . we'll be buying more. More lead and lumber from British Columbia. More raw zinc from British Columbia and Manitoba. More raw copper and nickel from Ontario. More Canadian gas, lubricants, electrical equipment and power. When you buy Anaconda . . . you "Buy Canadian" in the fullest possible sense!

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Iron Mines Give Building a Boost

Effects of a two-year slowdown in mining activity are starting to show up in easier pace of mine construction activity.

But a few large projects may hold up the dollar value of work under way this year.

In the spotlight:

- **The finishing touches** on the $115 million nickel project of **International Nickel Co. of Canada** in northern Manitoba.
- **A full scale push** on giant iron projects in Quebec and Labrador by **Iron Ore Co. of Canada** and **Quebec Cartier Mining.**
- **Possible start** of construction on new projects from **Brunswick Mining & Smelting** in New Brunswick to a $10 million plant for **Bethlehem Copper Corp.** in B. C.

During the past year construction and engineering projects in the mineral industry slumped 25% to an estimated total of $62 million.

Biggest factor in the dip: An end to the record setting construction boom in the uranium industry.

The race to get the industry into production pushed expenditures on mining construction to a peak of $183 million in 1957 and to $84 million in 1958.

In addition to the sag in uranium, low metal prices in recent years have slowed the pace of exploration.

Result has been fewer discoveries where a decision to go into production would mean large construction projects.

Most of the construction this year, as in 1959, is concentrated in the iron ore industry.

Canadian subsidiaries of giant U. S. steel mills are rushing mining and milling plants to turn out ore for the hungry blast furnaces.

Biggest project under way this year is the $220 million Quebec Cartier project in northern Quebec.

It calls for a 193-mi. railway from Shelter Bay on the north shore of the St. Lawrence River. Construction on this is well advanced.

Townsites for initial population of 5,000 people (one at the mine and another near the St. Lawrence harbor), docking facilities, and a large concentrating plant at Mount Reed are also involved in the program which is not scheduled for completion until 1961.

Further north, Iron Ore Co. of Canada is starting work on its Carol Lake deposit in the Wabush Lake area of Labrador. Cost of the project, scheduled for completion in 1962, is estimated at $150 million.

Bulk of mining construction in recent years has been grabbed by mineral rich Ontario and Quebec.

And there are few signs on the horizon to indicate a major shift in the centre of activity.

But there are smaller projects just getting under way in several areas across the country.

In Newfoundland **Atlantic Coast Copper Mines** is planning construction of a mining and milling plant to be completed by the end of this year. Cost would be about $2 million.

By the end of this year an $18 million decision is expected by developers of **Advocate Mines** on placing their asbestos property in production.

In the Maritimes, plans are well advanced on a $20 million project of Brunswick Mining & Smelting to put its property at Bathurst, N.B., into production. A start on the plant may be made this year.

On the West Coast, the largest project currently under way is a $20 million by-product pig iron plant being built by **Consolidated Mining & Smelting** at its Trail base metal and chemical complex.

Japanese financing may get another B. C. copper plant off the ground this year.

Bethlehem Copper has been stalled on its $10-$15 million plans for production as it looked for finances. Negotiations are now under way which could mean a start in construction this year.

On the Prairies, the only activity this year is centred around potash production in Saskatchewan.

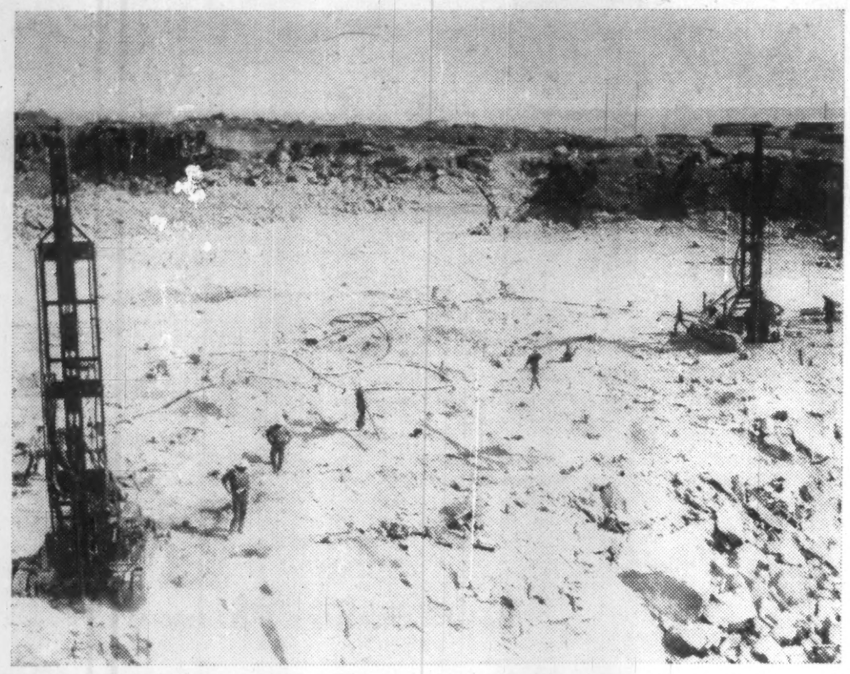
But two $20 million projects sponsored by U. S. companies have run into trouble as they attempt to sink concrete shafts to the deposits buried 3,000 ft. below the rich wheat land.

They have encountered water in some formations and have been attempting to freeze the ground to permit safe shaft sinking.

Any significant upturn in the pace of construction this year would probably result from decision of various Ontario and Quebec properties that are now getting close to decision on production.

Key area to watch is the Mattagami region of northwestern Quebec where three companies are rushing underground work.

A decision to go ahead would probably mean a zinc smelter in addition to the regular mining and milling plants. A new townsite would also have to be built.



PORT CARTIER'S eastern section, which is being blasted out of solid rock "in the dry". Drill holes are loaded for a bench blast.

Blast Deep-Sea Harbor In St. Lawrence Shore

A deep-sea harbor to take giant ore carriers is being blasted out of solid rock on the shore of the St. Lawrence near Shelter Bay, Que.

One of the largest excavations in recent Canadian construction history, the new harbor is part of **Quebec-Cartier Mining Co.'s** huge iron ore development in Northern Quebec.

The development includes a 200-mi. railway, a new iron ore mine, a hydro-electric project and two new towns.

The harbor, to be known as Port Cartier, is a joint enterprise of **Canit Construction Quebec Ltd.** and **A. Janin & Co.**

It will be well over half a mile in length and 50-ft. deep at low tide.

This operation is not a mere deepening and widening of an existing natural harbor but an excavation in the solid rock shore, requiring the removal of some 6,000,000 sq. yd. of rock.

Because explosive costs form an appreciable part of the total cost in a major rock moving enterprise such as this, Canit-Janin was anxious to take advantage of the new, lower-cost, blasting agents.

Wetness in some areas of the work limited the usefulness of the less water resistant blasting agents such as the ammonium nitrate and fuel oil mixtures.

Furthermore, these blasting agents have not sufficient density and strength to eliminate all "toe" problems and ensure good fragmentation under hard-breaking conditions.

When work began on the harbor, late in the winter of 1958-59, the explosives division of **Canadian Industries Ltd.** was well advanced in the development of Hydromex — a unique blasting agent.

Denser and more powerful than existing blasting agents (explosives composed largely of amonium nitrate and containing no nitroglycerine), it is also water compatible.

Hydromex is a mixture, or slurry, of TNT, ammonium nitrate and water and has the appearance and consistency of porridge.

Oddly enough, the water does not reduce the effectiveness of the explosive, as is commonly the case, but actually takes part in the detonation process.

The consistency of this explosive is another advantage.

When a polythene bag of Hydromex is loaded it expands to fill the borehole completely, thus eliminating air spaces and ensuring a load of maximum density and strength.

At the start of the Port Cartier project, Hydromex was being used in open pit iron ore mines.

The harbor project is much like an open pit operation and Canit-Janin were quick to see the possibilities of Hydromex for their work.

With technical help from C-I-L's explosives division, they introduced Hydromex to the job and exploited its strength, density and high velocity of detonation to obtain good fragmentation.

Canit-Janin blasters are loading Hydromex in the bottom of the boreholes to provide plenty of energy for breaking the "toe".

If the holes are dry, top loads of ammonium nitrate and fuel oil mixtures are used.

Otherwise, a high explosive such as Forcite is loaded up the borehole on top of the Hydromex.

A Baughman truck, in which ammonium nitrate prills and fuel oil are mixed to predetermined proportions and blown through a hose in the drill holes, is being used by Canit-Janin at Port Cartier.

They purchased it through **Mussens Ltd.**, Canadian sales agent for these machines.

The harbor is scheduled for completion in December 1960.

According to Quebec-Cartier, it will be capable of handling ore carriers of the greatest foreseeable size.

These carriers will be loaded with ore from cars which will come down the railway from Lac Jeannine — location of the mine and concentrator.

When the project is fully operating, annual production will approximate 20 million tons of ore which will be processed into some 8,000,000 tons of high grade iron concentrates.

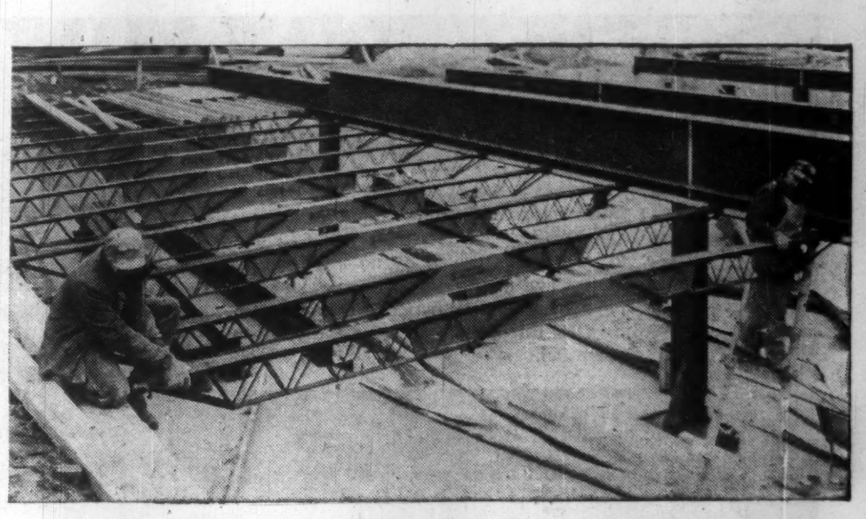
Tough Job For Toronto Bridge Men

A unique and challenging construction job has been completed at the new Toronto Board of Education building site, College & McCaul Streets, Toronto.

Two of the largest precast reinforced-concrete beams in the metropolitan area were raised 40 ft. and placed in position to form the walls of a bridge linking the new seven-story administration building with an existing warehouse at the rear.

Fifty-six feet long by 12½ ft. in depth, the massive beams, or trusses, were fabricated on the site by **Toronto Cast Stone Co.**, under the direction of the architect, **Page & Steele** in collaboration with **M. S. Yolles**, engineer on the project.

Erection of the twin, lattice-patterned beams was a difficult and delicate operation due to the confined space in which the raising took place. Only one crane was able to function in the area. Although only eight inches thick, each of the beams weighed 21 tons. The erection was completed in one day.



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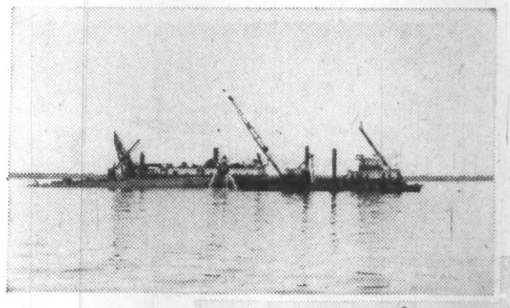
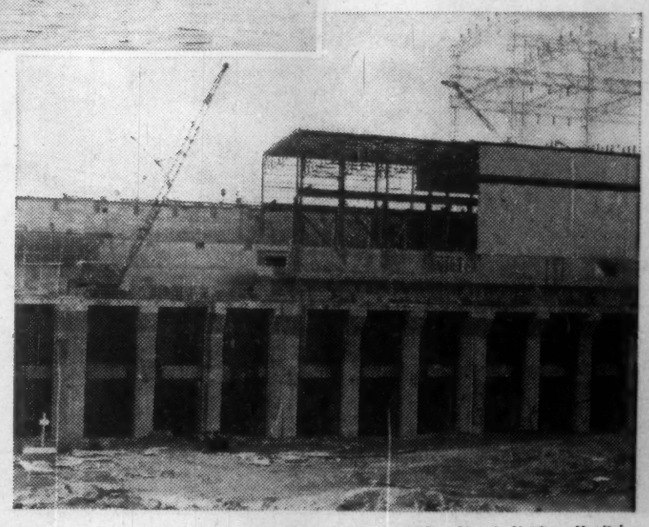


Pictured at left are two McNamara dredges working on the project of straightening and deepening the shipping channel in the St. Lawrence River at Champlain Curve, Quebec. The McNamara firm will dredge 1,000,000 cubic yards of material in carrying out this project.



Shown above is the powerhouse under construction on the Nelson River in Northern Manitoba to supply 210,000 horsepower of electrical energy to the Manitoba Hydro-Electric Board. This large power development is being carried out by the joint venture team of McNamara-Brown & Root, with McNamara sponsoring.

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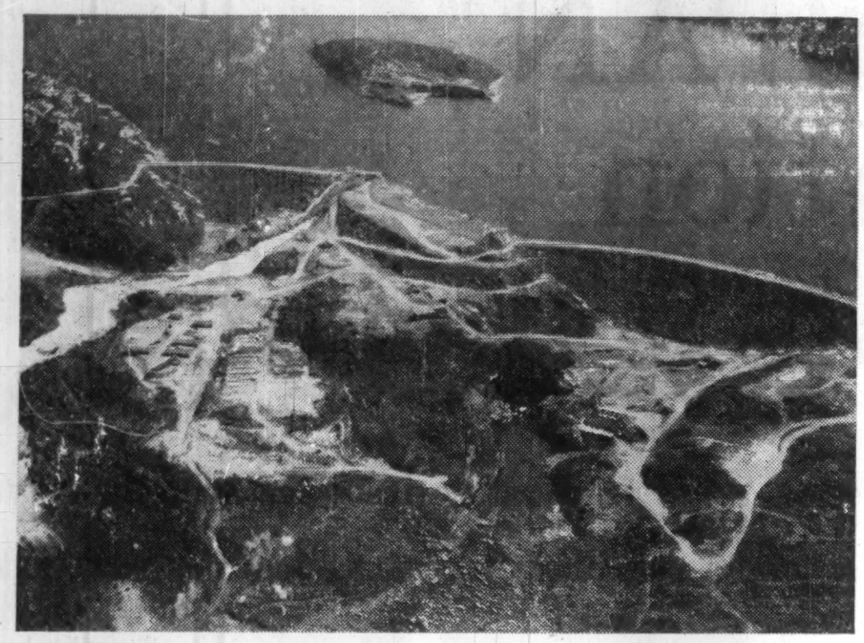


BERSIMIS No 1 rock fill main dam of the Quebec Hydro power project on the Bersimis River is 200 ft. high with crest length of 2,100 ft. It was designed by H. G. Acres & Co.

Few structures still preserve as great an individuality as do dams.

No two dams ever built have been alike in all respects.

This is not surprising when one considers the innumerable combinations of conditions imposed upon the design and construction by the choice of the site.

These include:

- **Foundation conditions.**
- **Availability of natural materials for construction.**
- **Seismic activity** of the region.
- **Climatological characteristics** of the site such as temperatures and rainfall.
- **Hydrological factors** such as flood flows.
- **Possible schemes** of river diversion.
- **Problems of access** and supply of materials.
- **Relative costs of** labor, plant, and materials.
- **Available time** for construction.

All these must be considered in the design of the dam, the combination of them will determine the most suitable basic type of dam, and many of them will to a greater or lesser degree influence its main features.

Despite this complexity of considerations, dam design and construction has not remained immune from changes in engineering fashions or fads.

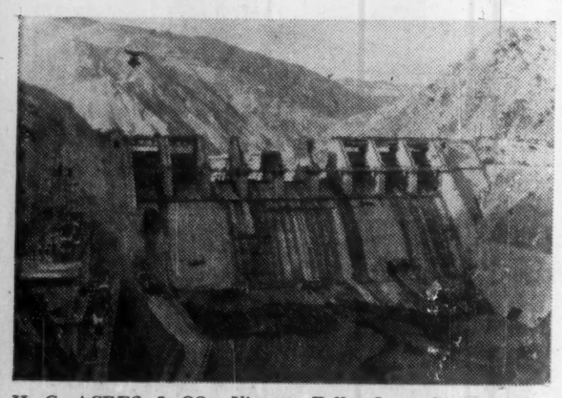
Mechanization as opposed to standardization has, however, been one of the most important single factors influencing the evolution of dam design and construction within the last century.

Since the middle of the 19th century great strides have been made in dam building and the pace has accelerated remarkably since the turn of the century in the more highly developed countries.

Within the past 60 years the maximum height of dams has increased from about 190 ft. to over 900 ft.

This prodigious progress has not been due to a deliberate attempt by engineers to build structures of record-breaking dimensions but is a ramification of economic and industrial expansion — particularly the growth of the demand for electrical energy and the resulting development of hydroelectric resources.

This has made it possible to fully utilize hydroelectric potential of a river producing perhaps four or five million hp. within a period of 10 or 15 years.



H. G. ACRES & CO., Niagara Falls, Ont., designed the 250-ft. high concrete gravity main dam of the Warsak hydro-electric project on the Kabul River in Pakistan.

This in turn has rendered capital investment in the large dams necessary for the utilization of these resources both necessary and economically sound.

There is every reason to believe that dams larger and higher than those now in existence or under construction will yet be built and that dam designers and builders, with constantly improving techniques at their command, will prove equal to the challenge.

Dams are generally classified according to the principal materials of their construction and they divide into two main groups—masonry dams and earth and rock-fill dams.

Few structures can lay claim to such ancient beginnings as the earth dyke.

However, the stability of earth structures is very much dependent on the properties of the earth and the methods of placing, and even if stable they are particularly vulnerable to damage from overtopping during floods.

Without the understanding provided by modern soil mechanics and river hydrology it's not surprising that failures of these dams were frequent and discouraging.

Early earth dams were normally homogeneous, that is, they were composed entirely of one type of earth which was relatively impervious to water.

Such designs can still prove advantageous where pervious materials such as coarse sand and gravel are not available within reasonable hauling distances, but since the strength of the impervious clays or silts is comparatively low, it is usually preferable where both types of soil are available, to utilize the stronger pervious material for at least a major part of the dam.

Watertightness is assured by constructing a central or upstream impervious barrier.

If rock excavated from quarries or from works appurtenant to the dam is used instead of sand or gravel, the structure is termed a rock-fill dam.

With the development of modern quarrying methods, the rock-fill dam has found increasing application both on this continent and abroad.

The unsatisfactory performance of many early earth dams may be directly attributed to the failure to understand that the earth dam is a structure capable of being designed on sound engineering principles and utilizing the natural materials readily at hand in the most advantageous way to produce a safe, economic, and durable structure.

Rapid changes in the field of geotechnical engineering have, however, revolutionized our approach to earth dam design.

The development of modern soil mechanics studies in the early 1920s resulted in the recognition by engineers that soils, although infinitely variable in nature, are, nevertheless, engineering materials, the physical properties of which can be determined, predicted, and controlled on a scientific basis within reasonable limits.

Paralleling this development, great strides have been made in the mass handling of earth.

The need for special earth moving equipment was recognized in the U. S. as early as 1860, but the most significant advances have resulted from the introduction within the last 30 years of modern high-speed, large-capacity hauling and compaction equipment.

- **Production rates** have **increased greatly.**
- **Unit costs** of moving earth have decreased greatly.
- **Earth structures** as large as the 128 million cu. ft. Fort Peck Dam on the Missouri River in the U. S. have become possible.

Masonry, concrete, steel sheet piling, puddled clay, and rolled earth have been used for the impervious barrier of earth or rock-fill dams.

Chiefly responsible for the increasing use of rock-fill dams, both on this continent and abroad, is the favorable cost aspect, this type of dam being particularly well adapted to mechanization.

Large capacity quarrying equipment and hauling units permit rapid construction at a relatively low unit cost and with a small amount of labor.

In particular, the possibility of utilizing rock excavated from spillways and tunnels as rock fill can render the rock-fill dam very attractive from an economic viewpoint.

Modern rock-fill dams fall into two general classifications, the so-called deck type and the core type, the general characteristics of the first being the use of an impervious diaphragm on the upstream face of the rock fill, while the second classification implies the impervious core, either sloping or vertical, in the body of the rock fill.

One of the principal advantages of earth and rock-fill dams is that they do not require a rock foundation but can be, and very often are, constructed upon earth.

Concrete gravity dams of appreciable height on the other hand require a stronger and less compressible foundation of fairly competent rock.

It is possible to reduce the loads imposed upon the foundation of a concrete dam by utilizing a buttress type of design with a slab footing at the base but where materials suitable for an earth or rock-fill dam exist within reasonable hauling distances, this expedient is seldom economical.

In a number of the more highly developed countries of the world, dams have already been built for hydroelectric power development, irrigation, or flood control at many of the better sites, and the designers of future projects will have to contend with increasingly difficult foundation problems.

In these circumstances, it is expected that an increasing proportion of the future dams built in these countries will be of the earth or rock-fill types.

The rock-fill dam is still rather uncommon in Canada, but the Kenney Dam in British Columbia with a maximum height of 317 ft. and the Bersimis No. 1 main dam in Quebec are among the higher dams of this type.

The present record for Canadian earth dams is held by the 190-ft. St. Mary's Dam in Alberta. It appears certain that in the future, earth and rock-fill dams of even greater heights will be built.

The vast majority of the concrete dams which have been constructed in Canada are gravity dams, the highest of these being the recently completed 290-ft. Bersimis No. 2 main dam, Quebec.

The gravity dam gave rise to a number of derived types such as the buttress dam with round or hammer-head buttresses and the Ambursen dam with reinforced concrete slabs on the upstream side spanning horizontally between the buttresses.

Modern buttress dams tend to be more massive than the earlier types.

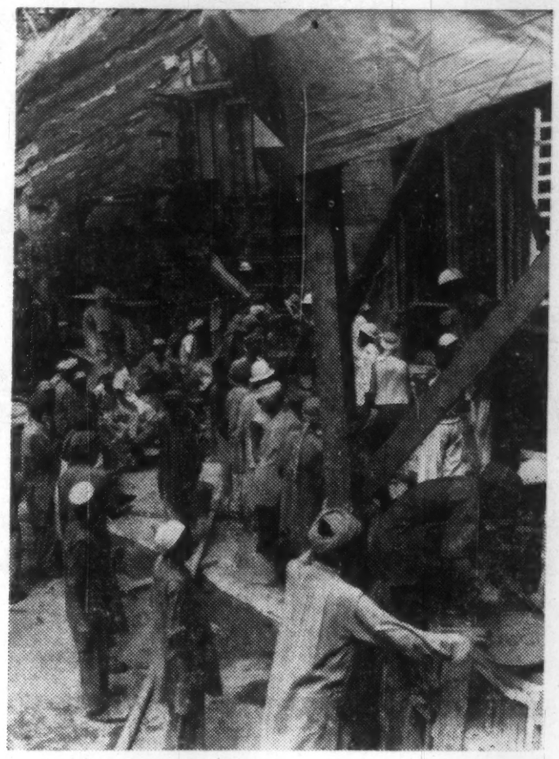
Wider buttress spacings and thicker concrete sections permit the use of high capacity concreting methods with their attendant lower unit cost and a considerable reduction, perhaps 40% or 50% in the volume of concrete which would be required for a comparable gravity dam.

It may be that these developments will lead to a renaissance of the buttress dam in its more massive forms.

Arch dams wherein the loads are transmitted by arch action to rigid rock abutments have been constructed in many countries during the last 75 years.

Significant advances have been made within the last 25 years toward a more thorough understanding of the mechanics of their action by analytical studies, laboratory testing of models, and full-scale testing of completed structures.

In North America, and particularly in Canada, the majority of damsites so far developed have had valleys which are wide in comparison with the dam heights and have been considered to be topographically unsuitable for the development of effective arch action.



ANCIENT AND modern — concreting ring around draft tube liner of unit No. One of Warsak project, using hand pans and transit mixers.

However, investigations and full-scale tests conducted recently in France suggest that the arch dam may yet prove to be both feasible and economic for the wide valleys which have hitherto been considered to be the preserve of other types of structure.

The 325-ft. high gravity arch dam on the Capilano River in British Columbia is Canada's highest dam.

In the U. S., and particularly in Europe, the multiple-arch dam has found application in the wider valleys.

Such dams consist basically of a number of comparatively short, simple concrete arch spans supported by reinforced concrete buttresses.

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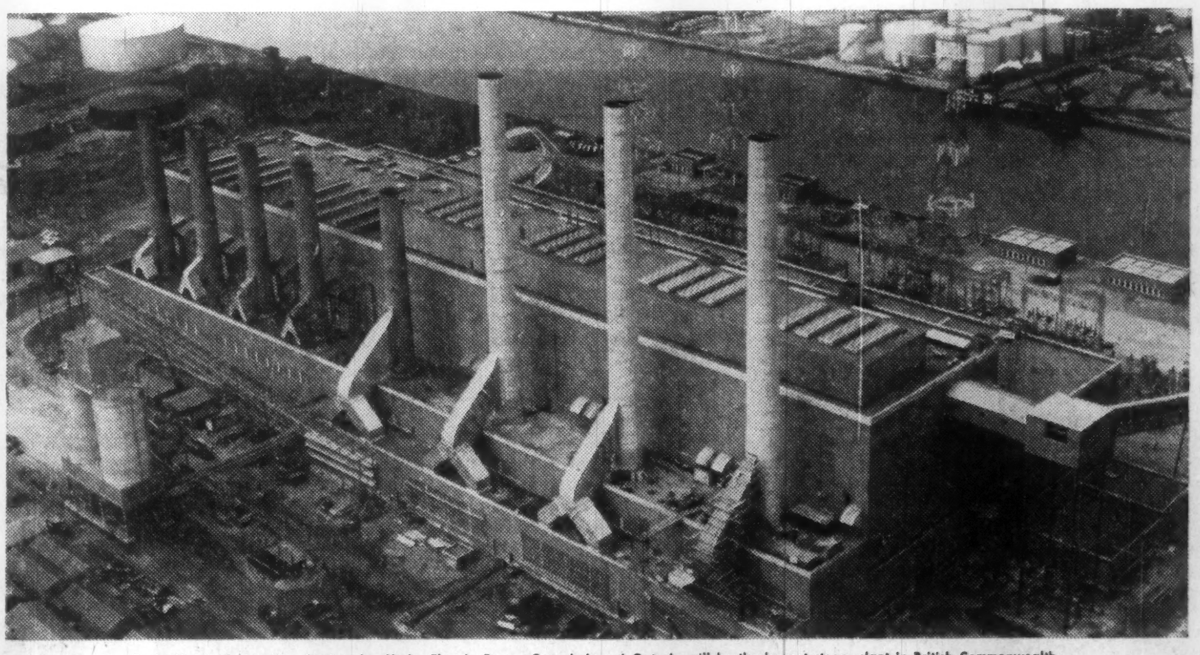

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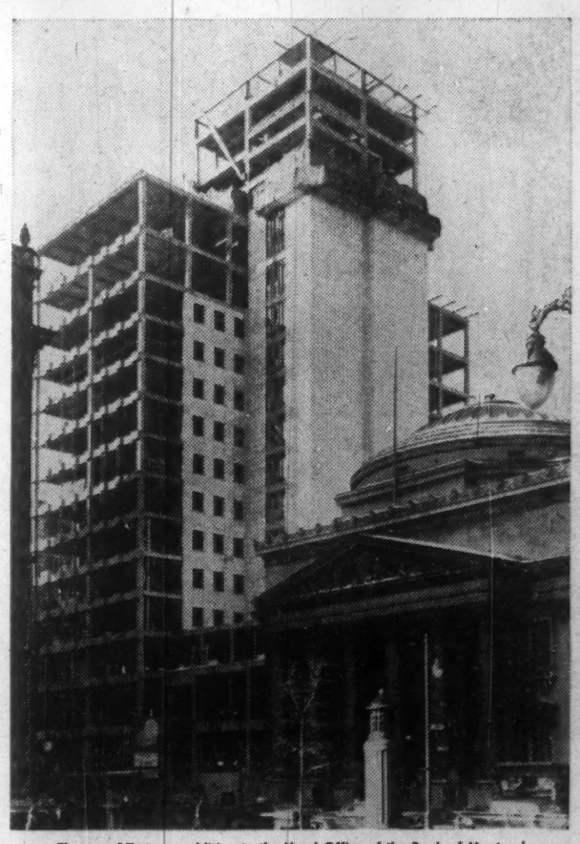

The new 17 storey addition to the Head Office of the Bank of Montreal.
Architects: Barott, Marshall, Merrett & Barott.

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